Proceedings of

3rd Cardio Metabolic Congress

10th & 11th August 2024 | Chennai, India

Theme: Metabolic Illusion: Unfolding the Mystery

Organized by:

International Society for Renal Research (ISRR)

3rd Cardio Metabolic Congress, India

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Website: www.theisrr.org
Email: info@theisrr.org

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3rd Cardio Metabolic Congress

CONFERENCE THEME:

METABOLIC ILLUSION: UNFOLDING THE MYSTERY

Conference Venue

Hotel Hilton, Chennai, India

Preface

This book reports the Proceedings of the "3rd Cardio Metabolic Congress" held on 10th & 11th August 2024 at Chennai, India organized by International Society for Renal Research (ISRR) with the theme "Theme: Metabolic Illusion: Unfolding the Mystery". The publishing department has received more than 250 abstracts. After a peer review of the submitted abstracts, 135+ abstracts were accepted for publication in the Conference Proceedings. We would like to thank all the participants for their contributions to the conference and the proceedings. Reviewing papers of the Cardio Metabolic Congress was a challenging process that relies on the good will of Faculties involved in the field.

We would like to thank all the reviewers for their time and effort in reviewing the abstracts. Finally, we would like to thank all the Cardio Metabolic Congress editorial committee members who with much dedication have given their constant support and priceless time to bring out the proceedings in a grand and successful manner. I am sure Cardio Metabolic Congress will be a credit to a large group of people, and each one of us should be proud of its successful outcome.

Dr. S. Chandrasekar

Organizing Secretary
3rd Cardio Metabolic Congress,
Chennai, India

About CMC

The 3rd Cardio Metabolic Congress is a gathering of global experts, serves as a vital forum addressing paramount issues in the field which is scheduled to be held in Chennai on 10th and 11th August 2024. This event comprises expert lectures, panels, workshops, and hands-on sessions, focusing on cutting-edge research and treatments for conditions like diabetes, obesity, and heart disease. Attendees gain proficiency in translating advanced medical research into practical clinical strategies for preventing, delaying, diagnosing, treating, and managing the entire spectrum of cardiorenal metabolic diseases. Beyond knowledge exchange, the congress fosters networking and collaboration among industry professionals, academics, and policymakers. Join us in person for an event where leading experts converge to explore the latest advancements in cardiovascular and metabolic health.

Vision

To lead the global interventional cardio-Metabolic community through education, advocacy, research, and quality patient care.

Mision

Providing quality evidence-based scientific knowledge to develop healthcare on preventive , promotive and rehabilitative aspects of diabetes and cardiac diseases.

About ISRR

The International Society for Renal Research (ISRR) is a global organization of nephrologists, researchers, and other professionals dedicated to advancing the science and practice of nephrology. The ISRR provides an international forum for scientific exchange and dialogue, offering educational opportunities, resources, and advocacy for the nephrology community. Through its annual meetings and publications, the society promotes research and clinical practice in the field of nephrology and educates the public about kidney health. The ISRR also works to improve the quality of life for those with kidney diseases and to advocate for better access to care and treatment.

Vision

The ISRR's vision is to be a leader in promoting excellence in renal research and to provide a forum for the exchange of scientific and clinical information worldwide.

Mission

The International Society for Renal Research (ISRR) is dedicated to advancing the science of renal research, its clinical applications and education in order to promote better health among individuals and communities worldwide.

Core Committee

The 3rd Cardio Metabolic Congress welcomes you all !

Dear Colleagues,

It is a pleasure to present Cardio Metabolic Congress on the 10th and 11th August 2024 at Hotel Hilton, Chennai. In order to keep with the phase of the scientific Technology and knowledge exposure in the field of Diabetology and Cardiology the theme is kept as "Metabolic Illusion: Unfolding the Mystery" to help the practitioners to bridge the knowledge gap.

After Creating a successful impact on healthcare community last year, we are excited to host a series of scientific discussions aimed at inspiring young physicians, medical graduates, Health care practitioners, and Cardio Diabetic medicine consultants. This scientific program will also serve as a valuable opportunity for aspiring students to showcase their work through oral and poster presentations.

This Conference features a blend of keynote sessions, panel discussion, Case discussions, workshops and many more with the expert speakers and accomplished faculties from throughout India to share their expertise and practical knowledge.

The venue is at the Hotel Hilton, Chennai which is known for its rich heritage, culture and so much more. We invite you all to be a part of this mega event. Hope this will bring out the latest and best practices in Cardiology and Diabetology.

Core Committee

3rd Cardio Metabolic Congress 2024

Dr. S M Rajendran
Patron

Dr. K Shanmugam
Patron

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Organizing Chairman

Dr. S Chandrasekar
Organizing Secretary

Dr. B vinod kumar
Scientific Committee Chairman

Abstract's Index

ABSTRACTS

Rhabdomyolysis Following Electrical Injury without Acute Kidney Injury – A Case Study

Dr. Ahamadhullah K
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. K. Kirubhakaran
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Introduction: Rhabdomyolysis (RML) is a well-known condition that can occur after electrical burns and crush injuries. It's characterized by widespread damage to skeletal muscles, which disrupts cell integrity in myocytes and causes intracellular components to enter the circulation. Rhabdomyolysis is an important etiology for developing acute kidney injury (AKI). There are many reasons for rhabdomyolysis, electrical injury seems to be a lesser-known factor.

Case description: A 55-year-old male patient was brought to the Emergency room (ER) with an alleged history of electric burn injury at his workplace. He was presented with a complaint of generalized body pain, pain in the bilateral upper arm throbbing in nature aggrevating on mobilizing, a history of headache, and a history of loss of consciousness. The patient was conscious, oriented, and afebrile. Vitals: BP-130/80 mm Hg, Heart rate-84 bpm and Sp02-98%@RA. The GCS score was 13 out of 15. On examination, first-degree burns on the anterior aspect of the abdomen, bilateral upper limb, wrist, and forearm were swollen and the peripheral pulse was feeble. Electrocardiography was in sinus rhythm and was unremarkable. Foley's catheter was inserted and dark-colored urine was observed. Immediately, intravenous hydration with 0.9% NaCl was initiated after the patient was admitted to the ER. Laboratory values of the patient on admission and during follow-up were done. The patient was advised for emergency fasciotomy. The provisional diagnosis was Rhabdomyolysis following second-degree electric shock.

Conclusion: Electrical injury is relatively less common among the etiological factors of rhabdomyolysis. However, it is very important to start effective fluid therapy in a short time. This approach may reduce the risk of AKI in this patient group.

Keywords:

Rhabdomyolysis, Electrical Injury, Acute Kidney Injury (AKI), Fluid Therapy

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A Case of Idiopathic Aortic Arch Thrombus

Dr. Deshmukh Payal Anil
Tagore Medical College and Hospital, Chennai, India

Dr. Nasreen
Tagore Medical College and Hospital, Chennai, India

Abstract:

Introduction: In the absence of significant atherosclerosis or any other risk factors aortic thrombus are uncommon. Spontaneous aortic thrombosis causing distal embolization and acute limb ischemia is an ominous medical condition will poor prognosis

Case Report: Presentation: 34 Year old Female Patient known case of seizure disorder came with

- complaints of pain in left upper limb for 1 months which was radiating towards neck.
- Since one day severe pain after which patient had I episode of Seizure followed by weakness of left upper limb.
- Complaints of headache, neck pain, vomiting and diminish vision

Past History: Known case of seizure disorder; No h/o SHT /DM / BA / PTB

O/E: Conscious, oriented, afebrile
No pallor, icterus, clubbing, cyanosis, lymph adenopathy, pedal edema
BP - 130/80 mmHg in Right arm
Pulse - 119 min in right radial arm
Absent in left radial, ulnar and brachial
SPO2 - 99% in right upper limb 70% in left upper limb

S/E: CNS: Bilateral pupil reacting to light (right > left).
Motor weakness present as left upper limb (2/5) decreased tone and reflexes (1+)
Plantar bilateral extensor and sensations affected in left upper limb
CVS – S1 S2 +, no murmurs
RS- NVBS+, no crepts / wheeze PA – soft

Investigations:

- Hemoglobin - 7.8
- Renal/ Liver function - Normal
- Lipid profile - Normal
- echo - Normal
- ANA/ ANCA/ APLA - Negative
- Protein C and S, Serum Homocysteine levels - Normal
- MRI Brain - Acute infarction in right PCA territory and left PICA territory
- **CT upper limb ANGIOGRAM** - Focal thrombus (12*5mm) noted in lateral wall at distal end of arch of aorta. Complete thrombosis of left subclavian artery, left axillary artery. Partial thrombosis of left brachial, ulnar and radial arteries.

Diagnosis: **A Case of Idiopathic Aortic Arch Thrombus**

Treatment: Anticoagulant therapies

Conclusion: A spontaneous thrombus may develop in aortic arch in patients without any risk factors or family history. Thrombosis causing distal embolization and acute limb ischemia is an ominous medical condition. Diagnosis should be suspected in patients with unexplained lower extremity Symptoms and pulse deficits.

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Study of Cardio-Metabolic Risk Profile in Subclinical Hypothyroidism Patients

Dr. R. Cibin
Tagore Medical College and Hospital, Chennai, India

Dr. Selvamani
Tagore Medical College and Hospital, Chennai, India

Abstract:

Introduction: The study is based on identification of Cardio-Metabolic Risk Factors associated with Sub Clinical Hypothyroidism

Aim & Objective: To identify diverse cardiometabolic biomarkers across subclinical hypothyroid patients with no previous cardiovascular disease

Method: Cross Sectional Study

Result: Insulin Resistance, Dyslipidemia, Inflammatory markers were found increased in patients with Sub-Clinical Hypothyroidism resulting in high risk for Cardio Vascular Diseases.

Conclusion: Sub-Clinical Hypothyroidism patients had differences in their biomarker profile that indicated worsening of cardiovascular risk when compared to euthyroid individuals.

Keywords:

Subclinical Hypothyroidism, Insulin Resistance, Dyslipidemia, CardioVascular Disease

Correlation of Halp Score with Outcome of Acute Ischemlic Stroke

Dr. Prem Balaji Reddy
Saveetha Medlical College and Hospital, Chennai, India

Dr. Magesh Kumar S
Saveetha Medlical College and Hospital, Chennai, India

Abstract:

Introduction: The Hematologic and Lymphocyte Parameter (Halp) score, incorporating hematologic and lymphocyte parameters, is being explored as a prognostic biomarker for various medical conditions. This study aims to determine the correlation between Halpscore and outcomes in patients with acute ischemic stroke. Understanding this relationship can help in early risk stratification and management of stroke patients.

Materials and Methods: A cohort of patients diagnosed with acute ischemic stroke was retrospectively analyzed. The Halpscore was calculated based on complete blood count parameters at the time of hospital admission. Stroke severity was assessed using the National Institutes of Health Stroke Scale (NIHSS), and patient outcomes were measured using the modified Rankin Scale (mRS) at discharge and three months post-stroke. Statistical analyses, including correlation and regression models, were employed to investigate the association between Halp scores and stroke outcomes.

Results: The study found a significant correlation between higher Halp scores and increased stroke severity and poorer outcomes. Patients with elevated Halp scores exhibited higher NIHSS scores at admission and worse functional outcomes (higher mRS scores) at discharge and three months post-stroke. These findings suggest that the Halpscore is a reliable indicator of stroke prognosis.

Discussion: The results indicate that the Halpscore can serve as a useful biomarker in predicting the severity and outcomes of acute ischemic stroke. The correlation between elevated Halp scores and adverse stroke outcomes underscores the potential of incorporating this score into clinical practice for early intervention and personalized treatment strategies. Further studies are needed to explore the underlying mechanisms and validate these findings across larger and more diverse populations.

Conclusion: The study concludes that the Halpscore is significantly associated with the outcomes of acute ischemic stroke. Higher Halp scores correlate with greater stroke severity and poorer functional recovery.

Keywords:

Acute Ischemic Stroke, Stroke Risk Factors, Stroke Outcome, Ischemic Stroke Prognosis, Clinical Predictors, Mortality, Immuno hematological Markers

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Triple Diuretic and Tolvaptan Strategy for Acute Decompensated Heart Failure due to Volume Overload with Cardiorenal Syndrome

Dr. Pruthvi
Sri Venkateswara Medical College, Tirupati, India

Abstract:

Background: Patients with congestive heart failure Decompensate mainly because of enhanced sympathetic, arginine vasopressin, and renin-angiotensin-aldosterone activation. This neurohormonal activation leads to upregulation of the renin-angiotensin system and intrarenal vasoconstriction which accelerates renal sodium and water retention leading to volume overload. Diuretics have been historically the mainstay of therapy during heart failure admissions. Tolvaptan has been utilised to improve fluid and osmotic balance by inhibiting water retention without altering electrolytes in Acute Decompensated heart failure. In oliguric and anuric ADHF patients with severe volume overload and need for aggressive diuresis, the use tolvaptan with triple diuretic therapy can be tried before ultrafiltration is considered.

Case Summary: Our patient is a 69y old woman presented to emergency room with progressive dyspnea and weight gain of 10 Kgs within 3 weeks. Cardiac history was significant for dilated cardiomyopathy with left ventricular ejection fraction of 34%, severe diastolic dysfunction and chronic kidney disease Grade 4 due to cardiorenal syndrome.

On physical examination, the patient was afebrile, with respiratory distress and not able to complete full sentences. Her blood pressure was 110/70mmHg, heart rate was 67/min, respiratory rate was 24/min and oxygen saturation was 94% with 4L nasal prongs. Her weight was 132Kg. She had jugular venous distension to angle of mandible. Cardiac examination revealed regular rhythm with s3 gallop. Lung examination showed bilateral fine crepitations. Abdomen was protuberant with ascites. Laboratory data revealed serum sodium of 138mEq/L, potassium of 5.3mEq/L, chloride of 101mEq/L, Creatinine of 2.9mEq/L.

Her B-type natriuretic peptide was 560pg/ml.

Chest X-ray showed moderate right and mild left pleural effusion.

She was treated with triple diuretics and tolvaptan strategy to optimise her volume overload. Over the course of seven days with this combination therapy the patient achieved a 26Kg weight loss. Her serum creatinine improved to 2.6mg/dl while her serum electrolytes remained stable.

Conclusion: We describe a successful strategy in treating grossly volume overloaded acute Decompensated heart failure with cardio renal syndrome achieving high urine output while maintaining stable serum electrolytes and creatinine and thus reducing the 30 day hospital admission rates. We recommend that this protocol should only be used in intensive care setting with close monitoring of serum electrolytes under supervision of experienced team of intensive care physicians.

Keywords:

Acute Decompensated Heart Failure, Cardio Renal Syndrome, Triple Diuretic Therapy, Tolvaptan

Correlation Cardiac Abnormalities with Spirometric Severity of COPD

Dr. Arun Babu. V
Chettinad Hospital & Research Institute, Chennai, India

Dr. G. Ashok
Chettinad Hospital & Research Institute, Chennai, India

Abstract:

Aim: To study the ECG and Echocardiographic (ECHO) abnormalities in patients of COPD, and its correlation with spirometric severity. To study the correlation between inflammatory markers (CRP) and cardiac abnormalities (ECG& ECHO).

Methods: Cross sectional analytical study was conducted in Chettinad Hospital & Research Institute, Chennai-India. 55 stable COPD (both Inpatients & outpatients) were recruited in this study. The selected patients were subjected to Spirometry, ECG, Electrocardiography and CRP.

Results: A total of 55 stable COPD subjects, with the mean age of 56.5 years and male preponderance of 63.6% were observed. According to GOLD severity 30.9 % & 50.9 % had moderate and severe COPD respectively.58.1% were smokers among which 43.6% of smokers with pack years of >20 had moderate to severe COPD. The most common ECG pattern in Moderate and Severe COPD was p pulmonale (45.4%) followed by Right Axis Deviation (41.8%). Echocardiographic findings of Pulmonary hypertension, Right atrium and ventricle dilatation and Tricuspid regurgitation correlated significantly with severity of COPD. There was a significant increase in Mean CRP and MPV values with the severity of COPD. Subjects with cardiac abnormality had a mean MPV of >9.1 with 96.7% sensitivity and 84% of specificity. CRP levels of >6.3 were significantly observed with cardiac abnormality with 96.7% sensitivity and 84.0% specificity.

Conclusion: There was a significant association of cardiac abnormalities and inflammatory markers with severity of COPD. Hence, early cardiac assessment and evaluation of inflammatory markers would enable us to predict the severity of COPD, to optimize management in order to prevent morbidity and mortality.

Keywords:

COPD, Cardiac Abnormality

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A Case of Non Ketotic Hyperosmolar Hyperglycemia induced Generalized Chorea & Ballismus

Dr. E. Pradeep Kumar
Tagore Medical College and Hospital, Chennai, India

Dr. Aishwarya
Tagore Medical College and Hospital, Chennai, India

Abstract:

Introduction: Hyperkinetic movement disorders are characterized by involuntary movements accompanied by weakness. Chorea are defined as rapid,semipurposeful,graceful,dance like non patterened involuntary movements involving distal or proximal muscle groups.Ballismus are defined as violent form of chorea composed of wild, flinging, large amplitude movements.Chorea and Ballismus are rare neurological complications of non ketotic hyperglycemia.

Case Report: Presentation: 70 yrs old female, newly diagnosed diabetes mellitus presented with c/o

- *Continuous, rapid, involuntary movements initially involving right upper and lower limbs which progressed to involve all the 4 limbs, face and trunk and increased vigorously in intensity for the past 1 week*
- Patient was diagnosed to have *diabetes incidentally* elsewhere when she presented with the chorea.No h/o headache / LOC during the movements/vomiting / seizures / fever/trauma, fall/ involuntary micturition / defecation
- No h/o chest pain, cough, breathlessness

Past History: Newly diagnosed diabetes mellitus x 1 week; No h/o SHT / epilepsy / BA / PTB

O/E: Conscious, oriented, afebrile
No pallor, icterus, clubbing, cyanosis, lymph adenopathy, pedal edema
BP- 130/80 mmHg
PR- 96/min

S/E: CNS: GCS – 15/15. *Motor- rapid, involuntary, certain graceful and some flinging, non-patterned movements involving lower limbs predominantly than upper limbs, right > left with orofacial movements and trunk*
Other examinations were not elicitable
CVS – S1 S2 +, no murmurs
RS- NVBS+, no crepts / wheeze
PA – soft

Investigations:

- CBG – *high (on admission)*
- Urine ketones - negative
- CBC, LFT, RFT were normal
- CT Brain – normal
- MRI brain – *T1 hyperintensity of bilateral basal ganglia*

Diagnosis: **Non-Ketotic Hyperosmolar Hyperglycemia Induced Generalised Chorea & Ballismus**

Treatment:

- Glycemic control
- Inj. Haloperidol
- Tab. Sodium valproate

Conclusion: Non Ketotic Hyperglycemia Chorea and Ballismus (NKH-CB) is an uncommon metablic syndrome and generally has a good prognosis.If patient presents present with acute or subacute choreiform and ballistic movements,the possibility of NKH-CB should be considered,while serum glucose levels,serum osmolality and HbA1c levels should be considered.

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Analysis of Syntax Score of Coronary Artery Disease Patients with Normal and Abnormal Values of Monocyte Lymphocyte Ratio

Dr. Madhusuthana Chakarvarthi S
Chettinad Hospital & Research Institute, Chennai, India

Dr. G. Ashok
Chettinad Hospital & Research Institute, Chennai, India

Abstract:

Background: Monocytes and lymphocytes are type of white blood cells that fight off bacteria, virus and fungi. As a major contributor on the initiation and aggravation of atherosclerosis, inflammation regulated by immune cells, could accelerate atherosclerotic progression, ultimately causing plaque rupture and serious adverse events related to coronary artery disease. The syntax score system is a evaluation system to reflect the coronary artery stenosis prospectively.

Methods and Results: It is a prospective study conducted in chettinad hospital with 100 patients who have underwent coronary angiogram.

Results: Based on gender, out of 100 patients 65 were male patients, 35 were female patients. Considering the number of patients in different age group with coronary artery disease 61-70 years have greater number of patients. Comparing mean age group of normal and abnormal monocyte lymphocyte ratio, the abnormal ratio have higher age. Out of 100 patients 52 had mild syntax score level, 26 had moderate score, 22 had severe syntax score. The normal group have highest number of patients in mild syntax score, the abnormal group have highest in moderate syntax score.

Conclusion: In the study conducted on coronary artery disease patients from our tertiary care hospital, we have analysed syntax score with normal and abnormal values of monocyte lymphocyte ratio. Our analysis revealed that in normal group, mild syntax score had higher number of subjects (60.29%) and in abnormal group, moderate syntax score had higher number of subjects (50%) with coronary artery disease.

Keywords:

Syntax Score, Coronary Artery Disease, Patients, Monocyte Lymphocyte Ratio

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A Study to Assess the Correlation of Anthropometric Measurements with Severity of Coronary Artery Disease among the Patients with Chronic Stable Angina

Dr. Somisetti Manibabu
Chettinad Hospital & Research Institute, Chennai, India

Dr. G. Ashok
Chettinad Hospital & Research Institute, Chennai, India

Abstract:

Obesity and overweight have been recognized as modifiable risk factors for coronary artery disease and may be linked to more severe Coronary artery disease. Our goal is to identify the relationship between anthropometric measurements and the existence of severe CAD in patients with Chronic Stable Angina who have undergone coronary angiographic evaluation.

Chronic stable angina is defined as regular or predictable angina symptoms that have been occurring for over 2 months. Symptom are transient or typically provoked by exertion, and alleviated by rest or nitroglycerin.

Obesity contributes directly to incident cardiovascular risk factors, including dyslipidaemia, type 2 diabetes, hypertension, and sleep disorders. Obesity also leads to the development of cardiovascular disease and cardiovascular disease mortality independently of other cardiovascular risk factors. Lifestyle modification and subsequent weight loss improve both metabolic syndrome and associated systemic inflammation and endothelial dysfunction. we summarize the impact of obesity on the diagnosis, clinical management, and outcomes of atherosclerotic cardiovascular disease, heart failure, and arrhythmias, especially sudden cardiac death and atrial fibrillation. we will examine the influence of obesity on non-invasive and invasive diagnostic procedures for coronary artery disease. we will describe the effects of lifestyle and surgical weight loss interventions on outcomes related to coronary artery disease, heart failure, and atrial fibrillation.

Keywords:

Anthropometric Measurements, Coronary Artery Disease, Chronic Stable Angina

A Prospective Observational Study on Echocardiographic Assessment of Pulmonary Capillary Wedge Pressure using Pulse Wave Doppler in Hemodialysis Patients

Dr. Aaron Neville Edwin
Chettinad Hospital & Research Institute, Chennai, India

Dr. G. Ashok
Chettinad Hospital & Research Institute, Chennai, India

Abstract:

Chronic disease of kidney is defined as the progressive loss of renal function. The dysfunction of excretory system often undergoes undetectable and undiagnosed till the condition gets worsened. Clinical Physicians use GFR (Glomerular Filtration Rate) to determine at which of the CKD stage, a patient rests in.

The Patients who were in End Stage Renal Disease, will undergo for Hemodialysis. There are various modes of Hemodialysis were used in current practice. During the period of dialysis it is very important to note the status of volume load in patients. Because excess volume retraction might cause complication like Hypotension, Muscle cramps etc. Simultaneously, Intra dialysis weight gain (i.e, excess volume intake) may leads to symptoms like Dyspnoea during exertion.

Hence, the correct determination of Dry weight is an important factor in dialysis practice. Dry weight is defined as the post dialysis weight gain of the patient, where the patient, doesn't develop any of the above said complications. In current practice, there were various volume markers like systolic blood pressure, Pulse pressure, Mean arterial pressure, NT – Pro BNP, LA Diameter.

Keywords:

Anthropometric Measurements, Coronary Artery Disease, Chronic Stable Angina

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Innovative Approaches in Contrast-Induced Nephropathy Prevention: Case Series of Ultra-Low Contrast and Zero Contrast Percutaneous Coronary Interventions

Dr. Smaran Korada
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. B Vinod Kumar
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Abstract:

Contrast-induced nephropathy (CIN) remains a significant concern following intravascular administration of iodinated contrast media, particularly in patients with multiple comorbidities undergoing coronary angiography and percutaneous coronary intervention (PCI). Traditional preventive measures such as adequate hydration and contrast volume limitation have shown efficacy but may not suffice for high-risk patients. Emerging techniques including ultra-low contrast angiography and zero contrast PCI offer promising alternatives for mitigating CIN risk. In this case series, we present clinical outcomes post-intervention in patients stratified by Mehran score who underwent these innovative approaches. Through a retrospective analysis, we highlight the feasibility, safety, and effectiveness of ultra-low contrast and zero contrast techniques in reducing CIN incidence and improving patient outcomes in high-risk populations. These findings underscore the importance of individualized strategies in CIN prevention and suggest a potential paradigm shift in the management of contrast-related complications in coronary interventions.

Methods: The study enrolled patients who underwent percutaneous coronary intervention (PCI) employing ultra-low contrast or zero contrast techniques in the last 1 year. Serum creatinine levels were assessed before the procedure, and renal function was monitored closely for 72 hours afterward. Patients were subsequently followed up for three months. Coronary angiography utilized a minimal contrast approach, with a maximum of 6 ml administered. PCI procedures employed minimal contrast alongside the intravenous ultrasound method for guidance.

Result: The study comprised three patients, with an average age of 65 years. Among them, two were male, and one was female. Each patient had prevalent comorbidities such as diabetes mellitus, systemic hypertension, and dyslipidemia. Their collective average Mehran score stood at 24, signifying a notable risk of contrast-induced nephropathy (CIN). During PCI procedures, the mean contrast volume administered was 4 ml. Before the intervention, the mean serum creatinine level was 1.8 mg/dL (eGFR 20-23 ml/min/m2). Following the procedure, there was no significant elevation in serum creatinine levels, with a mere 0.3% average increase compared to conventional methods. These results imply that employing ultra-low contrast and zero contrast PCI techniques might effectively reduce the likelihood of CIN in high-risk individuals, prompting further exploration and validation in larger patient cohorts.

Conclusion: In summary, ultra-low contrast and zero contrast PCI techniques present a significant advancement for patients with pre-existing kidney disease. These methods effectively mitigate the risk of contrast-induced nephropathy, offering a boon in enhancing procedural safety and improving patient outcomes.

Keywords:

Ultra-Low Contrast, Zero Contrast PCI, CI-CIN

Case Series of Thrombolysis for Acute Ischemic Stroke and It's Outcomes in Government Peripheral Hospital - Periyar Nagar (Chennai)

Dr. Perarivaalan Era
Government Peripheral Hospital - Periyar Nagar, Chennai, India

Dr. Ram Prasanth
Government Peripheral Hospital - Periyar Nagar, Chennai, India

Dr. T S Santhi
Madras Medical College, Chennai, India

Dr. K Hemalata
Rajiv Gandhi Government General Hospital, Chennai, India

Abstract:

Introduction: We postgraduates at MMC, had a three months of posting at Government peripheral hospital - Periyar Nagar as academic schedule. During this period we came across many window period strokes and successfully lysed with Alteplase provided under TAEI scheme. We did this so confidently based on the knowledge gained at Critical care colloquium conducted on 5.10.24. So presenting our experience regarding the same in the upcoming cardio metabolic congress, would be so relevant.

Case 1: A 45 years old male auto driver who is hypertensive was brought with sudden onset of weakness of left side of body along with facial deviation to right within 90 minutes of onset. NCCT Brain showed no hemorrhage with the right cortical ribbon sign. The patient then thrombolysed with Alteplase and MRI Brain done on day 2 showed right MCA infarct.

Case 2: A 40 years old male laborer who is diabetic, was brought with sudden weakness of right side of body with deviation of angle of mouth to left. NCCT Brain which was taken within 2 hours of onset of symptoms showed a left dense MCA sign with no hemorrhage. This patient also got thrombolysed with Alteplase as above. MRI Brain done on day 2 showed left MCA infarct.

Case 3: A 48 years old male laborer know case of old CVA with recovered right hemiparesis, was brought with complaints of sudden weakness of the same side. NCCT Brain was taken around 60 minutes after onset of symptoms. It showed an old infarct at the left Parietal region. This patient also got thrombolysed with Alteplase and MRI Brain taken on the next day showed left MCA infarct.

Outcomes: All the three showed immediate improvement in limb functioning. All the patients who were followed for about 30 days showed better outcomes.

Inference: From this we share our experience in treating the Acute ischemic stroke with Alteplase at a peripheral hospital where window period strokes are quite common. Thrombolysis for acute ischemic stroke at initial stage would bring a better outcomes.

Keywords:

Acute Ischemic Stroke, Alteplase, Thrombolysis and Window Period Stroke

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Narayana Health

Hidden Threats: Unreveling Infiltrative Cardiac Diseases

Dr. Revathi K
Narayana Hrudayalaya Hospital, Bengaluru, India

Dr Murali Mohan B V
Narayana Hrudayalaya Hospital, Bengaluru, India

Abstract:

Background: This abstract discusses three cases where advanced imaging played a crucial role in the diagnosis and early treatment of complex cardiovascular and systemic conditions. Infiltrative cardiomyopathies are characterized by the deposition of abnormal substances that cause the ventricular walls to become progressively rigid, thereby impeding ventricular filling. Some infiltrative cardiac diseases increase ventricular wall thickness, while others cause chamber enlargement with secondary wall thinning. Advances in non-invasive cardiovascular imaging have allowed for improved diagnosis of infiltrative heart disease, as well as ways to track disease progression or regression, thus enabling a mechanism to follow response to therapy.

Case 1: A 71-year-old female presented with symptoms suggestive of heart failure and systemic involvement. Imaging modalities including ECHO and PET-CT revealed restrictive cardiomyopathy due to cardiac amyloidosis, confirmed by biopsy and protein electrophoresis indicating multiple myeloma. Prompt initiation of chemotherapy and immunosuppressive therapy stabilized the patient's condition.

Case 2: A 36-year-old female doctor presented with cardiopulmonary symptoms and abnormal ECG findings. Extensive imaging with cardiac MRI and FDG PET CT identified features suggestive of myocarditis or sarcoidosis. Despite inconclusive biopsy results, imaging guided the decision to treat empirically for both conditions due to clinical and occupational history, with subsequent implantation of an AICD for ventricular tachycardia.

Case 3: A 57-year-old male with a history of cardiac symptoms and multi-system complaints underwent comprehensive imaging including ECHO and FDG PET CT, which revealed sarcoidosis with cardiac involvement. Biopsy confirmed the diagnosis. Early initiation of steroid therapy and immunosuppressive agents effectively managed the disease, including the implantation of a pacemaker for arrhythmias.

Conclusion: In all cases, advanced imaging techniques provided critical insights into disease etiology and extent of organ involvement, guiding targeted therapies and improving patient outcomes. Early recognition and treatment based on imaging findings are pivotal in managing complex cardiovascular and systemic diseases effectively.

Keywords:

Cardiac Amyloidosis, Cardiac Sarcoidosis, Infiltrative Cardiac Disease, FDG PET CT for sarcoidosis

A Case of Cardiovascular Shower

Dr. C Harini
SRM Medical College Hospital and Research Centre, Kattankulathur, Chennai, India

Abstract:

A 47 yr old male patient, known case of Rheumatic heart disease s/p mitral valve replacement and on oral anticoagulant came with complaints of deviation of angle of mouth and weakness of upper limb. Patient had history of high grade fever for past 1 week associated with anorexia and cachexia. Brain imaging showed multiple small hemorrhagic infarct not corresponding to any vascular territory and on further evaluation had no positive fever profile. Search for common source of embolism in view of CT brain findings with carotid angiography and 2d echo done which showed vegetation in aortic valve blood culture from 3 different sites taken and all 3 showed growth of Abiotrophia defectiva species. A diagnosis of infective endocarditis causing embolization and hemorrhagic infarct was made and patient was started on iv antibiotics, anticoagulant and planned for aortic valve replacement in view of insufficiency.

Keywords:

This case emphasizes the importance of thorough evaluation and importance of early identification of common source of embolism in patients with focal neurological deficits

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A Case of Maternal Atrioventricular Nodal Re-entrant Tachycardia during Pregnancy

Dr. Naveen Prasad K V
Tagore Medical College and Hospital, Chennai, India

Dr. Aishwarya
Tagore Medical College and Hospital, Chennai, India

Abstract:

During pregnancy, the physiological changes predispose a woman for the development of new-onset or recurrent arrhythmia. Atrioventricular nodal re-entrant tachycardia (AVNRT) is a common supraventricular tachycardia (SVT) in reproductive age of woman. Although often it is benign in nature but concerning. Electrical cardioversion is safe during pregnancy. Electrophysiological study (EPS) and Radiofrequency ablation (RFA) can be performed in selected patients. Hereby, we report a case of a woman in her second trimester of pregnancy presented with diagnosed case of AVNRT. She was monitored by multidisciplinary team. Electrocardiogram (ECG) and Echocardiogram reveals normal changes. EPS and RFA was done one year back at the time of diagnosis. At her 37 weeks of pregnancy, she developed scar tenderness. Emergency caesarean section was done in presence of cardiologist. Maternal and perinatal outcome were good.

Keywords:

Atrioventricular Nodal Re-Entrant Tachycardia, Cardio-Obstetrics, Catheter Ablation, Radio Frequency Ablation, Supraventricular Tachycardia

Prevalance of Metabolic Syndrome in Interstitial Lung Disease Patients

Dr. Swetha. S
Tagore Medical College and Hospital, Chennai, India

Dr. Selvamani
Tagore Medical College and Hospital, Chennai, India

Abstract:

Inflammation and physical inactivity are common potential mechanisms for metabolic syndrome (MS) and interstitial lung diseases (ILD). Metabolic syndrome is a group of conditions that together raise your risk of coronary heart disease, diabetes, stroke, and other serious health problems. Metabolic syndrome is also called insulin resistance syndrome. Interstitial lung disease (ILD) is a term for a group of over 200 conditions that cause inflammation and scarring in your lungs. ILD damages the tissues between the small air sacs in your lungs (alveoli) and the blood vessels around them. This makes it harder for you to move oxygen out of your lungs and into your body.

Objectives: 1) To determine factors preceding metabolic syndrome and its frequency in ILD patients.

Methods: A descriptive analytical, hospital-based cross-sectional study was conducted at Tagore Medical College and Hospital. A total of 64 patients diagnosed with ILD were enrolled in the study. Patients had fibrosis classification (FC) according to Muller method by performing HRCT examinations and total fibrosis score (TFS) is obtained according to fibrosis degree in the whole lung. MS diagnosis was made according to National Cholesterol Education Program (NAEP). Total MS component number was also calculated as MS score. Patients had respiratory function, carbon monoxide diffusion, and lung volume tests, and arterial blood gaseous analyses were performed.

Conclusion: Metabolic disorders in ILD are increased in relationship with parameters showing the disease severity.

Keywords:

Atrioventricular Nodal Re-Entrant Tachycardia, Cardio-Obstetrics, Catheter Ablation, Radio Frequency Ablation, Supraventricular Tachycardia

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Unusual Case Presentation of Systemic Lupus Erythematosus in a Middle Aged Female

Dr. L. Sathish Kumar
Tagore Medical College and Hospital, Chennai, India

Abstract:

Introduction: Systemic Lupus Erythematosus (SLE) is a chronic, multisystem autoimmune disease characterized by very protean clinical manifestations which commonly includes cutaneous and articular manifestations. Here we present a case of middle aged woman who presented with polyserositis and cardiac failure.

Case Report: A 55 years old female from Melakottaiyur came to Medicine OPD with complaints of abdomen distension for 1 week, breathlessness for 5 days and bilateral leg swelling for 1 day. There was a significant past history of severe anaemia with Hb – 4 gms/dl with pancytopenia for which 5 units of whole blood transfusion was done 1 month back. There were no other co morbid illness. On examination, she had anasarca. Systemic examination of cardiovascular system revealed soft S1 and S2 with pansystolic murmur, Respiratory system: Decreased air entry on basal region of both sides, Abdomen: Distended with positive shifting dullness and mild splenomegaly. Examination of Central nervous system was normal. Blood investigations revealed thrombocytopenia, hypoalbuminemia, hypokalemia, low serum C3 level, normal serum C4 levels. Renal function tests and thyroid profile were within normal limits. Antinuclear antibody was positive with cytoplasmic filament pattern. Ascitic fluid analysis was suggestive of exudative effusion. 2D Echocardiography revealed dilated cardiomyopathy with heart failure with reduced ejection fraction (EF- 30%). A diagnosis of Connective tissue disorder – Systemic lupus erythematosus with polyserositis (EULAR score – 14) was made. Patient was treated with Methylprednisolone pulse therapy, diuretics, antibiotics, hydroxychloroquine and albumin transfusion. She got symptomatically improved.

Conclusion: SLE can present with variable manifestations with the most common presentation being cutaneous and musculoskeletal involvement. Our patient presented to us with polyserositis, Dilated cardiomyopathy and congestive cardiac failure which is relatively a rare presentation.

Keywords:

Systemic Lupus Erythematosus, Middle Aged Female, Connective Tissue Disorder

A Study on Electrocardiographic and 2D Cardiographic Changes among Acute Stroke Subjects

Dr. Vonti Mitta Ismayeel
Tagore Medical College and Hospital, Chennai, India

Abstract:

Stroke or Cerebrovascular accident is defined as an abrupt onset of a neurologic deficit that is attributable to a focal vascular cause. Thus,the definition of stroke is clinical, and laboratory studies including brain imaging are used to support the diagnosis .Acute stroke (AS)-induced cardiac injury is of utmost clinical importance.

Stroke is the third leading cause of death in developed countries after cardiovascular disease and cancer.

The modifiable risk factors for stroke are Hypertension, Diabetes Mellitus, Smoking and Hypercholesterolemia.

AS can induce cardiac injury which presents with elevated concentrations of cardiac biochemical markers, ST-segment deviations, T wave inversion, Q waves, and abnormal left ventricular (LV) function.

Objectives:

- To study clinico-demographic profile of study subjects.
- To study incidence of abnormal electrocardiographic changes among acute stroke subjects.
- To study incidence of abnormal 2D Echocardiographic changes among acute stroke subjects.

Methods: Hospital based cross sectional study was carried out involving 50 patients aged 18-80 years, who will be diagnosed as acute stroke based on CT/MRI findings. Patients with k/c/o- stroke, H/o head trauma, existing bleeding disorder, H/o underlying coronary heart diseases, with ECG abnormalities were excluded from the study.

Results: Total of 50 patients with acute stroke were taken with mean age of 60 +/- 9.6 years were taken.

M:F was 1.4:1(29/21). Male of age 50-80 were predominantly affected Most common ECG CHANGES seen: 1) QTc prolongation in 30%(12); 2) ST-T changes 10%(2); 3)Prominent Q waves 20% (4). Most Common 2D ECHO changes: a) Ejection Fraction (15%); b) Dilated cardiomyopathy (3%); c) Left ventricular aneurysm (2%); d) Mitral stenosis (2%) Incidence of Acute Stroke was more among male than female

Conclusion: Acute stroke (AS)-induced cardiac injury is of utmost clinical importance. Adverse cardiac events are the second leading cause of death during the acute phase after stroke. AS can induce cardiac injury which can be seen on ECG and 2D ECHO. The purpose of this study is to investigate the prevalence and type of ECG and Echocardiographic abnormalities in a patients attending to medicine ward/PD with acute stroke.

Keywords:

Electrocardiographic Changes, 2D Cardiographic Changes, Acute Stroke Subjects

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A Case of Sick Sinus Synrome with Stokes Adams Syndrome

Dr. X. Vijila
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. Ranga Bashyam
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. C. Arul Muragan
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Objective: To describe a case of sick sinus syndrome with stokes Adam syndrome Coronary artery disease in the elderly is a leading cause of mortality and its basic screening test include an ecg and 2d-echo. Ischemia to the heart affects conduction, contractility and the nodal system. The conduction anomaly and nodal system infarct goes undetected in routine ecg or atrioventricular desynchrony is often disregarded as non specific causes for an ischemia. Although it is rare for a patient to present with conduction anomaly without contractibility involvement, it plays a crucial role in suspicion of inferior and posterior wall myocardial ischemia where there are no st segment changes or regional wall motion abnormality in echo. sick sinus syndrome can be caused due to extrinsic causes such as beta blockers or acute right coronary infarct or inferior wall myocardial ischemia present as sinus pause ,exit block and sinus arrest. Stokes Adam syndrome is periodic fainting in which there is intermittent complete heart block that results ininadequate blood flow to the brain .abnormal movements are present which are not seizures happen due to brain stem hypoxia.

Method: Here is a case of sick sinus syndrome with stokes Adam syndrome reported in a 60 year old male on atenolol presented with repeated fainting episode with abnormal posture and movement with postictal confusion and involuntary passage of urine during such episodes. Resting ecg and 2d echo revealed no abnormalities with normal resting heart rate. Holter monitoring revealed sinus pause {incomplete heart block} during such episodes and mri angiogram showed attenuation in right vertebral artery. patient was managed with iv isoprenaline and pace maker was placed.

Conclusion: This report describes the clinical signs &symptoms, pathogenesis, prognosis and management of stokes Adam syndrome with no complaints of, chest pain and the necessity to perform an cardiac angiogram for its diagnosis.

Keywords:

Stoke Adam Syndrome, Sick Sinus Syndrome, Incomplete Heart Block

Endocrine Paralysis

Dr. Varuna Priya C.
Madras Medical College, Chennai, India

Dr. Hariharan C.
Madras Medical College, Chennai, India

Dr. Yogesh
Madras Medical College, Chennai, India

Abstract:

Introduction: This is a series on the paralysis that occur in endocrinology.

CASE 1: A 55/F, k/c/o Addison's disease, presented with weakness in the lower limbs followed by the upper limbs and breathlessness. She was diagnosed with hypokalemic quadriparesis and Addison's crisis. Further investigation revealed hypokalemia, normal anion gap metabolic acidosis, alkaline urine pH, with urine potassium-40, urine calcium-magnesium ratio of 10.7, calcium-to-creatinine ratio of 0.16, suggestive of distal renal tubular acidosis (RTA). The hypokalemic quadriparesis, adrenal insufficiency, and distal RTA led to the evaluation which showed ACTH levels of 1914, cortisol levels of 0.67, positive Anti 21-hydroxylase Antibody, ANA 4+, positive AntiRo52/SSA, positive Schirmer's test, and suggestive results from Acton prolongatum test, indicating primary adrenal insufficiency. CECT of the adrenal glands was normal. The diagnosis is Sjogren's syndrome with autoimmune adrenalitis and distal RTA. which then treated with steroids.

CASE 2: A 25/M presented with complaints of weakness in the lower limbs for the past two days, following an afternoon of playing football and heavy meals. He also reported fever, palpitations, sweating, and a history of weight loss. On examination, he had a regular pulse with swelling in the front of his neck. Ultrasonography revealed multinodular goiter. His potassium level was low at 2 mEq/L. He had history of similar illness in the past and was diagnosed with hyperthyroidism but was not on treatment. His (TSH) was low at 0.01 mIU/L and FT4 was elevated at 10 microg/dL. He was diagnosed with thyrotoxic periodic paralysis with multinodular goiter and was started on potassium infusion, propranolol thrice daily, and carbimazole. With treatment, his symptoms settled, and he was planned for total thyroidectomy.

CASE 3: A 22/F presented with fever, loose stools, palpitations for five days, followed by weakness in the lower limbs for two days. On examination, she exhibited exophthalmos, sweating, a pulse rate of 128 beats per minute, diffuse thyroid enlargement, and a temperature of 101°F. Her TSH) was low at 0.007, and FT4 was elevated at 16. Based on the Burch-Wartofsky score of 35, she was diagnosed with an impending thyroid storm. Treatment was initiated with steroids, propranolol, and carbimazole. Positive anti-TSH receptor and anti-TBG antibodies indicated Graves' disease. Additionally, ANA speckled 4+ and positive anti-dsDNA led to the diagnosis of systemic lupus erythematosus (SLE) concurrent with Graves' disease, presenting with thyrotoxic paralysis and an impending thyroid storm. The patient was started on steroids and immunosuppressants for management.

Keywords:

Endocrine Paralysis

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The Effectiveness and Tolerability of Switching Patients from Sacubitril/ Valsartan to Perindopril in Heart Failure with Reduced Ejection Fraction

Dr. Rahul Shanmugam
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. Rajamani Shanmugasundaram
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. Pravin Selvam
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Introduction: The transition from sacubitril/valsartan (ARNI) to perindopril in managing heart failure with reduced ejection fraction (HFrEF) is a pivotal clinical consideration. This study investigates the effectiveness and tolerability of this switch, aiming to contribute valuable insights into optimizing treatment strategies for HFrEF patients and elucidate whether perindopril can serve as a alternative to ARNI in HFrEF.

Objectives: To evaluate the change in left ventricular ejection fraction (LVEF) following the switch from ARNI to perindopril in patients with HFrEF.

Methodology: A retrospective observational study was conducted from January to June 2024 at the Department of Medicine, V.M.K.V.Medical College Hospital, Salem. The inclusion criteria were patients >18 years old with HFrEF [NYHA] Classes I-IV and left ventricular ejection fraction [LVEF] < 40%) and with a stable sinus rhythm, who had been unable to tolerate or discontinued ARNI. The calculated sample size was 100 and the convenience sampling method was used.

Results: During the transition, the average age was 54 ± 12.1 years (mean ± SD), the disease duration was 2.8 ± 1.5 years, and 68.0% of the patients were male. The average period of follow-up following the transition was 5.3 ± 1.4 months. All patients maintained their NYHA functional class after the transition and improved LVEF from 38.0 % to 43.5% (P < .001) during the follow-up after the switchover.

Conclusion: The transfer from ARNI to perindopril was both well tolerated and safe. Patients' functional status was preserved, even if their NYHA class remained unchanged, and their LVEF showed a small improvement. There may be a financial benefit to switching from ARNI to perindopril in India.

Keywords:

Angiotensin receptor/neprilysin Inhibitor (ARNI), Perindopril, Heart Failure, Effectiveness

The Balancing Act: Strategic Maneuvering the Management of Hyperosmolar Hyperglycemic State in a Patient with Chronic Kidney Disease and Heart Failure

Dr. Nikhil S Nair
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. Rajamani Shanmugasundaram
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. Pravin Selvam
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Introduction: Managing Hyperosmolar Hyperglycemic State (HHS) in a patient with chronic kidney disease (CKD) and heart failure (HF) presents significant clinical challenges. HHS, marked by extreme hyperglycemia, dehydration, and altered mental status, becomes more complex with CKD and HF. Balancing fluid imbalances, electrolyte disturbances, and insulin resistance is critical to avoid worsening renal and cardiac conditions. This introduction highlights the need for tailored approaches to optimize patient outcomes.

Objective: To strategize fluid management in a patient in HHS who is a known case of chronic kidney disease and heart failure.

Methodology: This is a case report from the Department of General Medicine, VMKV Medical College and Hospital, Salem.

Results: A 67-year-old female with CKD (stage 4) and HFrEF-38% presented with breathlessness, confusion, tachypnea, and hypotension. Investigations revealed severe hyperosmolality (serum osmolality 330mOsm/kg), hyperglycemia (blood glucose600 mg/dL),creatinine(2.5mg/dL),and urea(80mg/dL),with low urine output(200 mL).She was diagnosed with HHS triggered by sepsis from grade 2 bed sores.The patient was started on fluid resuscitation with isotonic saline to correct hypovolemia, assessed using the NEWS scoring system. Careful monitoring of fluid status (IVC status, serum osmolality), electrolytes, and renal function was essential to prevent fluid overload. Insulin infusion was initiated for glycemic control, and potassium was closely monitored to prevent hypokalemia or hyperkalemia.

Conclusion: This case highlights the critical management approach required for a patient with HHS alongside chronic kidney disease and heart failure. Careful management of volume status, electrolyte balance, and renal function is paramount to guiding treatment effectively. Inadequate fluid management can lead to volume overload or coma, underscoring the importance of vigilant monitoring and precise intervention.

Keywords:

Hyperosmolar Hyperglycemic State (HHS), National Early Warning Score (NEWS)

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A Cross-Sectional Study on the Relationship between HbA1c and Ejection Fraction among Non-Diabetic Unstable Angina Patients

Dr. Saride Naveen Kumar
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. Rajamani Shanmugasundaram
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. Pravin Selvam
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Introduction: Introduction: HbA1c, crucial for monitoring long-term glucose control in diabetics, has less understood implications for non-diabetic patients, especially regarding cardiac function. This study investigates its relationship with ejection fraction in unstable angina patients without diabetes.

Aim and Objectives: This study investigates the correlation between admission HbA1c levels and ejection fraction (EF) among non-diabetic patients presenting with unstable angina (UA).

Methods: A cross-sectional study of non-diabetic patients diagnosed with unstable angina was selected. Admission HbA1c levels were measured upon hospital admission. Ejection fraction was assessed using echocardiography. Statistical analysis was performed to determine the correlation between admission HbA1c levels and EF.

Results: In our study, the mean age of the population was 55 years, with a predominance of male patients (62%). A correlation analysis between age and ejection fraction (EF) revealed that the age group 65-70 had the highest frequency of patients with EF < 50%. The mean HbA1c level of our study population was 5.9%. Females had relatively higher HbA1c levels (≥ 5.7%) compared to males. Admission HbA1c levels were higher in the EF < 50% group compared to the EF ≥ 50% group. Our research indicated that HbA1c levels above 5.7% were associated with severe coronary artery disease (EF < 50%).

Conclusion: This study highlights link between glycemic status and cardiac function in non-diabetic patients with unstable angina. Elevated HbA1c levels, even in the absence of diabetes, serve as a biomarker indicating an increased risk of developing coronary artery disease (EF < 50%).

Keywords:

HbA1c, Ejection Fraction, Non-Diabetic, Unstable Angina, Cardiac Function

Correlation of Lipoprotein (A) Level and Lipid Profile with the Severity of Coronary Artery Disease (Syntax Scoring)

Dr. Neeti Nachammai K M
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. Aruba Usman
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. K Vengadakrishan
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Abstract:

Introduction: Ischaemic heart disease is the leading cause of death and disability, as well as a leading economic burden. Coronary artery disease is a multifactorial phenomenon. Atherosclerosis is the initial step in the pathophysiology of CAD. Through its impact on lipid accumulation, lipoprotein(a) [Lp(a)] can affect how atherosclerotic plaques are formed and disrupted.

Aim:

- To correlate the lipid profile level and lipoprotein (a) level with the severity of coronary artery disease in reference to SYNTAX SCORE.
- To correlate the lipid profile level and lipoprotein (a) level with the vessel involvement in coronary artery disease.

Methodology:

- 154 patients who were either presenting to the OPD or getting admitted to the hospital and undergoing the Coronary artery Angiography (CAG) were included in the study after obtaining the informed consent.
- A detailed case history, anthropometric and demographic data, clinical examination and laboratory reports was collected.
- All patients underwent Complete Blood Count, Renal Function Test, Serum Electrolytes, Liver Function Test, Thyroid Profile, Fasting Blood Sugars, Post Prandial Blood Sugar, HbA1C, Fasting Lipid Profile, urine routine, ECG, 2DECHO, Serum lipoprotein (a).
- The lipoprotein (a) level was correlated to the severity of Coronary Artery Disease. The severity of Coronary Artery is determined by an angiographic tool-the synergy between percutaneous coronary intervention with taxus and cardiac surgery (SYNTAX) score.

Results:

- Among the subjects, 86 (55.84%) had < 30 mg/dl Lipoprotein (a) and 68 (44.16%) had > 30 mg/dl Lipoprotein (a).
- 72(46.75%) had SYNTAX score>20 and 82(53.25%) had SYNTAX score <20.
- 52 (33.77%) had Triple Vessel Disease, 38 (24.68%) had Single Vessel Disease, 37 (24.03%) had Double Vessel Disease and 27 (17.53%) had No CAD.
- Lipoprotein (a), Serum Total Cholesterol,Serum LDL and Serum Triglycerides had a positive correlation with SYNTAX score. Serum HDL has a negative correlation with SYNTAX score.
- The mean Lipoprotein (a) among Triple Vessel Disease was 46.55 which is higher than mean among Double Vessel Disease which was 43.3 followed by Single Vessel Disease with a mean of 28.56 and No CAD with a mean of 20.31 and the difference was statistically significant ($p < 0.05$).

Conclusion: Lipoprotein (a) levels were significantly associated with severity of CAD and vessel involvement. Higher Lipoprotein(a) score shows poor prognosis.

Keywords:

Correlation of Lipoprotein (A) Level, Lipid Profile, Coronary Artery Disease, Syntax Scoring

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Correlation of ST-Segment Depression in Cardiac Troponin-I Positive NSTEMI Cases

Dr. Murali. A
Tagore Medical College and Hospital, Chennai, India

Abstract:

Acute Coronary Syndrome (ACS), which includes unstable angina, non-ST elevation myocardial infarction (NSTEMI), and ST-elevation myocardial infarction (STEMI), is a major subset of coronary heart disease (CHD) caused by atherosclerosis-related plaque disruption in the coronary arteries.ST-segment depression, often as sociated with T wave alterations, can result from myocardial ischemia, hypokalemia, and medications like digitalis. Cardiac troponins are precise biomarkers for diagnosing ACS, correlating with the extent of cardiac myocyte damage.

Objectives: To study the proportion of ST-segment depression in Troponin-T positive NSTEMI cases and to find out the Correlation between Different ECG patterns and Troponin-I levels.

Methods: A descriptive analytical, hospital-based cross-sectional study was conducted at Tagore Medical College and Hospital. The study population included patients >18 years of age presenting with cardiac chest pain for 6 to 12 hours and diagnosed as NSTEMI. A total of 168 patients were included. Data collection involved history, general examination, ECG interpretation and Troponin-I levels.

Results: ST-segment depression was observed in 23% of the cases. T wave inversion was seen in 84% of patients. Both T wave inversion and ST depression were observed in 2% of patients, while no ST depression or T wave inversion was noted in 18%. Pearson correlation showed no significant association between Troponin-I levels and ST depression (p-value: 0.036).

Conclusion: There is no significant correlation between ST-segment depression and cardiac troponin-I levels in NSTEMI cases. However, the presence of ST-segment depression signifies a more severe cardiac condition.

Keywords:

ST-Segment Depression, Cardiac Troponin-I Positive, NSTEMI Cases, Acute Coronary Syndrome (ACS), Non-ST Elevation Myocardial Infarction (NSTEMI), Coronary Heart Disease (CHD)

Polymorphic Ventricular Tachycardia Associated with Non Ischemic Causes

Dr. Kutumbaka Tarun Sai
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. Preetam K
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. Vinod Kumar
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Abstract:

A case series of 3.

Case 1 - 54 years old female developed ventricular tachycardia. Patient was managed with IV lidocaine infusion followed by oral mexiletine. Extended electrolytes were normal. Cardiac enzymes were elevated with 2D echocardiogram showed regional wall motion abnormality. Coronary angiogram showed normal coronaries. Patient was stabilised. Repeat ECG showed normal sinus rhythm with long QT.

Case 2 - 80 years old female presented with acute gastroenteritis, serum electrolytes showed calcium 4.5 mg/dl, magnesium -1.4 mg/dl, potassium-3.7mg/dl. ECG showed QTc -750 msec. Meanwhile, the patient developed polymorphic ventricular tachycardia. Patient was resuscitated and started on lidocaine infusion. Under ultrasound guidance, cervical sympathetic block was given. Serum electrolytes were corrected. Repeat ECG showed normal sinus rhythm with long QT.

Case 3 - 50 years old male known diabetic, hypertension and old CVA who was on Tab.Hydrochlorothiazide 50 mg per day came with ECG showing long QT -500 msec. Patient was advised to stop hydrochlorothiazide. Patient was reinitiated on Tab. Hydrochlorothiazide 50 mg per day elsewhere in an outside hospital and later presented to ER with recurrent syncopal attacks and cardiac arrest. Serum potassium was 2.1 mEq/L. Thiazides was stopped and potassium correction was given. He underwent an implantable cardioverter defibrillator.

Common medical conditions / medications can precipitate malignant arrhythmia in susceptible individuals. Careful serum electrolytes to be monitored in every followup. These patients can be candidates for cardiac interventions.

Keywords:

Polymorphic Ventricular Tachycardia, Non Ischemic Causes

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Association between Thyroid Function and Severity of Coronary Artery Disease in Euthyroid Patients

Jha Sakshi
MGM Medical College and Hospital, Aurangabad, India

Udgire Prashant
MGM Medical College and Hospital, Aurangabad, India

Abstract:

Thyroid hormones, released directly into the bloodstream by thyroid gland have varied effects on the cardiovascular system. Overt and subclinical hypothyroidism, have been found to be associated with cardiovascular disease. Several studies have established association between overt and subtle thyroid function abnormalities and atherosclerosis. Our study aimed to establish a relationship between the variation of the serum thyroid hormone levels (TSH, FT3 and FT4) and the presence and severity of CAD in the euthyroid patients. We found out that in the absence of primary thyroid disease, the incidence of CAD is associated with lower serum levels of FT3. Only FT3 and not FT4 and TSH levels may be used as an indicator of increased risk for severe CAD.

Keywords:

Euthyroid, Thyroid Hormone

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T peak - T end Interval vs. Traditional ECG Criteria; Where Does It Stand in Diagnosing Left Ventricular Hypertrophy

Dr. Rahul. K
Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India

Abstract:

Introduction: Left ventricular hypertrophy (LVH) is an abnormal increase in left ventricular mass which increases the risk of adverse cardiovascular events. Regression of LVH due to treatment of hypertension predicts an improved prognosis. Twelve lead ECG is an easily accessible alternative to 2D Echo based cardiac mass estimation. In patients with high pre-test probability of LVH, such as in hypertensives, the positive predictive value of the Sokolow-Lyon, Cornell, and Peguero-Lo Presti criteria is high.

Objectives and Methodology: To compare Tp-Te interval, Sokolow Lyon, Cornell's product, Peguero – Lo Presti ECG criteria for LVH in patients with 2D Echo proven LVH. The emerging hypothesis that T peak – T end interval prolongation may be an indicator of LVH was studied. A total of 120 participants with Left ventricular hypertrophy in 2D Echo were selected and their twelve lead ECG were analyzed.

Results: The positive predictive value (PPV) of Peguero Lo presti criterion was significantly higher (46.7%) than Sokolow Lyon criterion (21.7%), Tp-Te interval (20%) and Cornell's product (14.2%)

Conclusion: The performance of the Peguero Lo presti criterion was better than that of the conventional LVH criteria and the new T p – T e interval. ECG is better used to rule in LVH than to rule out.

Keywords:

ECG, LVH, T peak T end interval, Tp-Te, Peguero Lo presti criterion

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Novel Acid Base Balance Theory- A Paradigm Shift from Conventional to Contemporary in ABG Interpretation

Dr. T. Rajini Samuel
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Abstract:

Introduction: Various approaches are available but only few graphical methods are there for Arterial Blood Gas (ABG) interpretation. A novel four quadrant graphical tool was developed by the current author. The calculated hydrogen ion concentration equivalent of standard bicarbonate is called the 'non-respiratory' hydrogen ion concentration. Novel acid base balance theory states that the net changes in total pH are due to both the changes in respiratory and non-respiratory (metabolic) component affecting the pH. Using this concept, an innovative ABG interpretation method was developed by the current author.

Aim & Objectives:

1. To construct a Novel four quadrant graphical tool for ABG interpretation
2. To develop a Novel pH based ABG interpretation method
3. To apply a newer equation to understand and identify hidden and mixed acid base disorders
4. To create a 7 Step approach for ABG interpretation integrating various approaches.

Methods: A four quadrant graphical tool applies Standard Base Excess (SBE), modified ratio 2 (derived using HCO_3, Std HCO_3 & $H2CO_3$) and (pCO_2 - 40 mm of Hg). The SBE is positive for metabolic alkalosis and negative for metabolic acidosis. Modified ratio 2 and (pCO_2 - 40 mm of Hg) are greater positive for respiratory acidosis and greater negative for respiratory alkalosis. The net changes in total pH are due to both the changes in respiratory [ΔRpH] and non-respiratory (metabolic) component [ΔNRpH] affecting the pH. A newer equation that correlates delta gap with other metabolic and respiratory components was developed.

Results: Each acid base disorder will occupy any of the four quadrants. The changes in respiratory [ΔRpH] and non-respiratory (metabolic) component [ΔNRpH] affecting the pH values are negative for acidic effect and positive for alkaline effect. The newer relation integrated with delta gap helps to identify the hidden acid base disorders.

Conclusion: These novel interpretation methods to identify the acid base disorders can be integrated by developing a mobile application or upgrading the software in the ABG analyzer itself. The implementation of this 7 steps approach will help to overcome the arduous task of ABG interpretation.

Keywords:

4 Quadrant graph, Novel pH based method, Hidden acid base disorders

Cardiac Vector Theory- A Transition from Conventional to Contemporary in ECG Interpretation

Dr. T. Rajini Samuel
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Abstract:

Introduction: Electrocardiogram (ECG) interpretation remains an arduous task and ECG phobia develops in some of the junior staffs often seeking the help of medical experts. Einthoven used the cardiac vector concept even before a century but never published a detailed description of it. Cardiac Vector Theory was proposed by the current author to understand, correlate and clearly analyse the ECG wave changes in different leads for various cardiac diseases.

Aim & Objectives:

1. To formulate and apply the cardiac vector Theory in ECG interpretation
2. To explain Einthoven Equilateral Triangle Model for the application of Novel ECG Interpretation

Methods: In the hex-axial reference system of ECG, plot the net voltages of bipolar limb leads (Lead I, II & III) and connect them. Similarly, plot the net voltages of unipolar limb leads (aVR, aVL & aVF) and connect them. Each forms equilateral triangle and it can be converted into circles. Each circles have same origin, same orientation, but different radii because bipolar and unipolar limb leads have different resistance. Multiply each unipolar limb lead voltages by correction factor 1.154 and then plot. Then the two equilateral triangles are on the same circle.

Results: Each cardiac wave (P, QRS, T) can be represented in the form of circles, the diameter denoting the resultant cardiac vector and the perimeter of the circle denotes the electrical field of the heart which it generates with heart at the center of the circle. All circles (see the diameter) should be formed in the left lower quadrant except QRS which can go up to -30 degree. The position, size and the angle between 'QRS' and 'T' circles changes in different cardiac conditions. The amount of myocardial injury will be related to the magnitude of circle during the ST-segment.

Conclusion: Cardiac Vector Theory forms the basic foundation in the teaching and understanding of ECG interpretation. So, this novel approach helps in saving countless lives of Coronary artery disease patients which continues to remain as the number one killer disease of the world.

Keywords:

Cardiac Vector, Lead Vector, Einthoven Equilateral Triangle

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A Study on the Prognostic Value of Galectin-3 Levels in Heart Failure

Dr. Vaishnavi Reddy A
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. Sowmya. G
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Abstract:

Introduction: Serum galectin-3 is a novel biomarker useful in prognostication of heart failure. In recent years, galectin-3 an inflammatory marker, has been demonstrated to be closely related to cardiac fibrosis and heart failure. The purpose of this study is to define galectin-3 in predicting mortality of heart failure in hospital admission period.

Aim: To determine the value of galectin-3 levels in patients with heart failure and assess its prognostic utility and look at correlation of values with in hospital mortality and morbidity.

Study Design: This is a prospective study conducted at department of general medicine, Sri Ramachandra medical college and research institute, Chennai in 95 patients with heart failure requiring ICU admission between 2022-2023.

Results: Mean galectin-3 levels were compared to cardiac markers, grade of diastolic dysfunction, number of chambers dilated and individual age groups which showed no statistical significance. However the galectin-3 levels in patients who died or intubated were significantly higher compared to other subjects. The mean distribution of galectin-3 levels in patients who died was 106.3 compared to patients who were alive was 55.46. The mean distribution of galectin-3 levels of patients who were intubated was 84.04 as compared to non intubated patients which was 57.03.

Conclusion: The study shows galectin-3 can be used in everyday clinical practise to identify patients who are at highest risk of HF in assessing the risk of mechanical ventilation or death. In patients with deteriorating HF, measuring galectin-3 could be a key component in prognostic utility for in hospital mortality and morbidity.

Keywords:

galectin-3, Heart Failure, Prognostic Utility

Effect of Diabetes and Antidiabetic Drugs on Blood Coagulation: A Case Control Study

Dr. Mansha Dua
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. Ranga Bashyam
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. Arul Murugan
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Diabetes is a common endocrine disorder. Due to persistent hyperglycemia glycation of proteins involved in clotting mechanism takes place which thus affects the clotting capacity. The aim of this study is to find the effect of diabetes on PT and aPTT levels and to do this we have tested these effects on treated diabetics, untreated (newly diagnosed diabetics) as well as non-diabetic controls. We further divided the study groups on the basis of antidiabetic drugs- Patients only on insulin (monotherapy), Insulin + oral hypoglycaemics, oral hypoglycaemics (monotherapy) and patients on oral hypoglycaemics (combination therapy). We found high values of PT and aPTT in untreated than control & treated. This suggests that insulin and oral antidiabetic drugs either in combination or as monotherapy may normalize PT & aPTT by maintaining glycated haemoglobin. Therefore, routine examinations of PT & aPTT are important to assess coagulation impairment in diabetes mellitus in order to prevent cardiovascular disease in diabetes.

Keywords:

Diabetes, Blood Coagulation, PT, aPTT, Cardiovascular Disease

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Study of Correlation of Lipid Sub-Fractions in Angiographically Proven Coronary Artery Disease Patients

Dr. Rajan Dilip Talele
MGM Medical College and Hospital, Aurangabad, India

Abstract:

Introduction: Coronary artery disease (CAD) is one of the major cardiovascular diseases (CVD) affecting the global human population. High levels of ApoB – containing lipoproteins, specifically non-HDL cholesterol and its main component, LDL cholesterol, are a primary cause of atherosclerosis, which is the key underlying process that eventually leads to clinical CVD events like myocardial infarction and stroke

Aim & Objective: To study of correlation of lipid sub-fractions with severity of coronary artery disease in angiographically proven cases undertaking parameters: a. Total serum cholesterol b. Total serum triglycerides c. Serum HDL, LDL, VLDL d. APO B and APO A1 and its ratio to compare the correlation of incidence of younger age CAD (<40years) and old age CAD (>40years) with Lipid-Sub fractions.

Methods: A Prospective Observational Study.

Observation: Lipid profile analysis revealed higher levels of total cholesterol, LDL, triglycerides, and APO B in DVD and TVD compared to SVD, with significant differences noted. HDL and apo A1 levels, however, did not differ significantly. Ratios of LDL/HDL and apo B/apo A1 was higher in more severe CAD cases but did not reach statistical significance. This study highlights the correlation between lipid subfractions and the severity of CAD. Elevated levels of total cholesterol, LDL, triglycerides, and apo B are associated with more severe CAD. These findings underscore the importance of lipid management in patients with CAD to mitigate disease progression.

Conclusion: Elevated levels of total cholesterol, LDL, triglycerides, and APO B were significantly associated with more severe forms of CAD.

Keywords:

ApoB, APO A1, triglycerides, CAD

Evaluation of Carotid Intimal Thickness in Assessing Cardiovascular Risk and End-Organ Damage in Hypertensive Patients

Dr. Thejdeep Mahamkali
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. C Arul Murugan
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Introduction: Increased carotid artery intima-media thickness (CIMT) has been linked to cardiovascular disease (CVD) development. CVD is a major cause of mortality and morbidity in India. Increased CIMT has been documented in Hypertension (HT), thus putting them at a higher risk of CVD. Early identification and awareness of risk factors leading to increased morbidity and mortality could help reduce its incidence. Carotid intima medial thickness (CIMT) measures the combined thickness of the intima and media layers of the carotid artery. It is a non-invasive, reproducible, and inexpensive tool that can be used to identify target organ damage.

Objectives: To examine the significance of carotid intima-media thickness (CIMT) in hypertensive patients for assessing cardiovascular risk and end-organ damage.

Methodology: A hospital-based cross-sectional study, conducted in a Tertiary care hospital, Salem. A total of 150 patients with hypertension attending the outpatient department of a tertiary care hospital were included in the study. A consecutive sampling was used to select the participants. The study period was between January to April 2024. Carotid artery intima-media thickness was measured using B-mode ultrasonography in all the study participants. Cardiovascular risk factors like body mass index (BMI), fasting blood glucose (FBS), and lipid profile, which are known to influence CIMT, were also assessed

Results: The mean systolic blood pressure (SBP) in cases was found to be 132.4±7.11mm of Hg and diastolic blood pressure (DBP) was 86.8±3.70 mm of Hg. The mean carotid IMT value was 0.82±0.19mm. Patients with greater CIMT presented significantly higher systolic blood pressure. There was a significant association between CIMT and age, systolic blood pressure, and lipid profile.

Conclusion: Carotid artery intima-media thickness is a strong and independent predictor of death and serious cardiovascular events in hypertensive patients. Further studies are needed to establish the prognostic value of clinical and biochemical factors associated with increased carotid IMT in treated hypertensive patients.

Keywords:

Carotid artery intima-media thickness. Hypertension, Cardiovascular risk, end organ damage

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Study of Retrospective Analysis of Atrial Fibrillation Risk in Patients with Premature Ventricular Contraction Burden

Dr. Harikrishnan G R
Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India

Dr. A. K. Badrinath
Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India

Abstract:

Introduction: Premature ventricular contraction (PVC) and atrial fibrillation (AF) are common arrhythmias affecting 1–2% of the general population. Patients with PVCs can also suffer from PVC-induced cardiomyopathy or ventricular tachyarrhythmias such as ventricular tachycardia and fibrillation. The risk of new-onset AF and ischemic stroke was increased in people with PVC.

Aim & Objectives: We aimed to assess the atrial fibrillation risk in patients based on the PVC burden and assessing the changes in electrocardiographic parameters.

Methodology: This is a hospital based retrospective study. The sample size was calculated to be 86. All patients who underwent Holter monitoring was included in the study after screening for the exclusion criteria and medical records of those patients were collected. ECG parameters and PVC burden from their Holter reports were analysed to predict the risk of atrial fibrillation.

Results: In my study of 86 subjects which included 49 (57%) males and 37 (43%) females, 57 (66.3%) had systemic hypertension, 37 (43%) had diabetes mellitus and 17 (19.8%) had dyslipidemia. Predominant ECG findings were, left atrial enlargement (32.6%), prolonged PR interval (15.1%), wide QRS complex (2.3%), left ventricular hypertrophy (18.6%), QT prolongation in males (32.6%), in females (29.1), pathological Q waves (14%), RBBB (4.7 %), LBBB (12.8%), other ECG changes like ST changes (2.3%), T wave changes (19.8 %). The variables which were statistically significant with PVC burden were left atrial enlargement, left ventricular hypertrophy, prolonged PR interval, LBBB with P value <0.05.

Conclusion: A routine ECG and holter performed can be used as a screening tool to predict the risk of atrial fibrillation.

Keywords:

Atrial Fibrillation, Electrocardiography, Premature Ventricular Contraction Burden

A Study of Renal Resistive Index as a Predictor of Early Renal Impairment in Hepatic Cirrhosis Patients

Dr. Mididoddi Rasmi Priya Setty
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. S R Ranga Bashyam
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. S Moogaambiga
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Introduction: Renal failure is a dreadful complication of cirrhosis. Hepatorenal syndrome (HRS) is a functional renal failure in cirrhotic patients, and despite its functional nature, HRS is associated with a poor prognosis and the only effective treatment is liver transplantation. It is very important to diagnose renal impairment in cirrhosis patients at an early stage before overt HRS develops. There is considerable evidence that interactions between systemic and portal hemodynamics lead to intense renal vasoconstriction and HRS. In patients with cirrhosis, early renal impairment can be predicted by the renal arterial resistance index (RI).

Aim: To determine the usefulness of RI in the early diagnosis of renal impairment in hepatic cirrhosis patients and assess its value for predicting subsequent renal status.

Methodology: A prospective study, was conducted in a Tertiary care hospital, Salem. A total of 58 participants attending the outpatient department of a tertiary care hospital were included in the study. The study period was between October 2023 to may 2024. Patients were divided into 2 groups. Group 1 contained patients with cirrhosis without ascites and group 2 contained cirrhosis patients with ascites. All patients were subjected to detailed clinical examination, laboratory investigations, and abdominal Doppler ultrasound with renal RI measurements.

Results: Mean age of patients in group 1 was 53.9 ± 14.8 years and that in group 2 was 51.9 ± 10.5 years. The majority of the participants were males constituting 68.0% (34) and 72.0% (36) of patients in groups 1 and 2 respectively. RI was significantly higher in cirrhotic patients (0.56 vs. 0.45, $p<0.001$).

Conclusion: The Intrarenal RI is a helpful predictor to identify a subgroup of patients with a higher risk of developing HRS. Renal RI may play an additional role in evaluating the severity and prognosis of the liver disease. This may help in identifying subgroups of cirrhotic patients who need more intense monitoring.

Keywords:

Liver Cirrhosis, Hepatorenal Syndrome, Intrarenal Resistance Index, Duplex Doppler Ultrasonography

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Knowledge, Attitude and Need Assessment Regarding Geriatric Health Care among the Geriatric Outpatients at a Tertiary Care Hospital in Puducherry

Dr. D.S.S.R.K Pavan
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Abstract:

Background: India is undergoing both epidemiologic and demographic transition. Geriatrics and geriatric health care are in vary early stages in India.

Objectives: 1. To evaluate the attitude of geriatric patients toward specialized geriatric healthcare. 2. To assess the willingness of geriatric patients to spend more time for checkups and follow-ups regularly. 3. To identify the level of satisfaction among geriatric patients with the existing healthcare.

Material and Methods: The present study was cross sectional study carried out in the department of general medicine among patients aged more than 60 years of age. The study period was 3 months. Informed consent was obtained from all participants. The sample size was estimated to 240. The data was collected in a semi structured questionnaire. Statistical analysis was done using descriptive statistics.

Results: 190 (79.2%) were in the age more than 60 years. 208 (86.7%) were satisfied with the health care provided. 218 (90.8%) visited at least one health unit in the past 1 year. 122 (50.8%) reported that they used to avoid visiting health care unit due to fear of going to hospitals / doctors. 210 (87.5%) believed specialized OPDs provide better accessibility for elderly patients. 231 (96.3%) believed the cost of medicine provided for elderly should be free or subsided or reduced.

Conclusion: The elderly patients are quite satisfied with the care provided. A visiting health care provider at home and mobile unit will aid in increasing the quality of care provided to the elderly. The burden of health care costs among elderly shall also be explored in the future research. There is also need for the implementation of specialized geriatric health care unit in the near future.

Keywords:

Knowledge, Attitude, Needs, Geriatric, Health Care, Accessibility, Information, Infrastructure

Intradialytic Adverse Effect of Maintenance Haemodialysis in Chronic Kidney Disease Patients

Sathiya Sai Kiruba K. B
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Abstract:

Background: Hemodialysis was the most common kidney replacement therapy. It was associated with both acute and chronic complications.

Objectives: To find out the adverse events during the maintenance haemodialysis in chronic kidney disease patients.

Material and Methods: This observational study was done in 2023 among 160 patients undergoing maintenance hemodialysis at Sri Venkateshwara Medical College Hospital and Research Institute, Pondicherry. The study was conducted after the approval of the Institutional Ethics Committee of Sri Venkateshwara Medical College Hospital and Research Institute, Pondicherry. The inclusion criteria were patients above the age of 18 years and End-stage renal disease patients undergoing maintenance hemodialysis at least twice a week. Informed consent was obtained from all the participants included in the study.

Results: 39% of the participants reported having at least one complication. 31.6% had hypotension as complication followed by 27.5% with muscle cramps. 12.2% had fever and chills and 10.2% had headache. 8.1% reported to have nausea and vomiting. Hypoglycemia developed in 4.1% and hypertension in 3.1%. Chest pain was reported by 2.1% and catheter tip migration in 1.1%. Among those in whom hypotension was a complication, 67.7% had diabetes mellitus followed by 16.1% with chronic glomerulonephritis. Among those with muscle cramps, 63% had hypertension followed by 18.5% with diabetes.

Conclusion: Four in ten who had undergone haemodialysis had at least one complication. The common complication is hypotension followed by muscle cramps.

Keywords:

Haemodialysis, Adverse Event, Hypotension, Muscle Cramps, Hypoglycaemia, Hypertension, Headache

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Assessment of Knowledge, Attitude, Practice Concerning the Insulin Adherence among the Adult Diabetic Outpatients in Tertiary Care Center, Puducherry

Sharan K. R
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Abstract:

Background: India is said to be the diabetic capital of the world. 30% of all diabetics is in insulin therapy. Inadequate awareness regarding insulin will affect its acceptance & adherence

Objectives: 1. To assess the knowledge, attitude, practice concerning insulin adherence among adult diabetic outpatients. 2. To determine the impact of patient counselling about the management of diabetes on insulin adherence.

Material and Methods: The present study was cross sectional study carried out among diabetic patients more than 18 years of age attending the outpatient department, department of general medicine. The study period was 3 months. Informed consent was obtained from all the participants included into the study. The sample size was estimated to 100. The data was collected in a semi structured questionnaire. Statistical analysis was done using descriptive statistics.

Results: 57% were in the age group 31 to 60 years. 59% were males. 69% resided in rural areas. The mean knowledge score was 7.58 ± 3.26. The mean attitude score was 7.41 ± 2.18. 76% reported to administer insulin 20 minutes before food. 54% reported to practice rotation of sites while injecting insulin. 21% got eye examined once every year. 31% reported to have checked HbA1C once every 3 months. 78% reported to have return insulin to shop in case expired. 51% reported to have injected insulin at 90 degrees and subcutaneously. 31% reported economic cause as barrier to use insulin regularly.

Conclusion: The study population was found to have moderate knowledge towards insulin. The attitude is more on the positive side. Both the above have reflected in the practice of adherence among the participants.

Keywords:

Diabetes, Knowledge, Attitude, Practice, insulin, management, Adherence

Role of Epicardial Adipose Tissue as an Indicator of Prognosis in Acute Coronary Syndrome

Prasanna Subbaraju
SRM Medical College Hospital and Research Centre, Kattankulathur, Chennai, India

Muralidharan Thoddi Ramamurthy
SRM Medical College Hospital and Research Centre, Kattankulathur, Chennai, India

Abstract:

Introduction: Epicardial adipose tissue (EAT) is the visceral lipid compartment between the myocardium and the visceral pericardium and it has been shown as an independent cardiometabolic risk factor for Coronary Artery Disease (CAD). Connection between EAT and Major Adverse Cardiac Events (MACE) is still unknown. The purpose of this study was to ascertain the association between EAT and 30-day MACE in patients who originally presented with ACS, as well as the link between EAT and CAD severity as determined by SYNTAX score and thereby identifying patients with higher risk of complications at an earlier stage.

Aims & Objectives: Main aim of this study is to elucidate the prognostic value of EAT in patients presenting with ACS. Primary objective: To study association of EAT with 30-day MACE; Secondary objective: To correlate EAT with CAD severity by syntax score in patients presenting with ACS

Methods: This study was conducted as a prospective observational study among patients presenting with ACS in our hospital from July 2023 to December 2023. Considering the prevalence of MACE as 10%, with relative precision of 5%, the sample size was calculated as 144. Considering the dropout /non participate rate of 15%, it was decided to sample about 168 subjects in to the study. Using echocardiography, Epicardial fat was measured and cases were observed for 30-day MACE. The data collected and the measurements EAT and syntax was analyzed by statistical software.

Results: In this study 30 days MACE was reported among 15 cases (8.9%). Age, BMI, duration of diabetes mellitus, duration of hypertension, duration of hospital stay, EAT and number of vessels involved and SYNTAX sores were remarkably high among the cases with 30 days MACE. Also, higher SYNTAX score (> 22) was found to be significantly associated with 30 days MACE. Additionally, age, BMI, duration of diabetes mellitus, duration of hypertension, duration of hospital stay, EAT and number of vessels involved were remarkably high among the cases with high SYNTAX score.

Conclusion: Conventional echocardiography measurement of EAT thickness can be used to determine MACE risk. Higher SYNTAX scores were also found to be correlated with MACE and EAT thickness. Thus, the practice of EAT assessment can be done as a part of routine screening echocardiography when the patient presents to emergency department in order to predict MACE.

Keywords:

Epicardial Adipose Tissue, ACS, Echocardiography, SYNTAX score

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A Study of Chronic Phenytoin Toxicity and Its Clinical Manifestations in Epileptogenic Patients

Dr. B. Harish
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. C. Arulmurugan
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. Heyma Krishna Manoharan
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Introduction: seizures/epilepsy affects 10 in 1000 population and cause a hindrance in lifestyle and day to day activities. The role of antiepileptics is crucial in preventing recurrence and providing a seizure free lifestyle. With a wide range of antiepeleptics availabe phenytoin is the cheapest and efficacious in preventing seizure. The long term use of phenytoid leads to side effects such as gum hypertrophy, ataxia and cerebellar atrophy.

Aims: To assess and compare the side effects and occurence of phenytoin toxicity in epeileptogenic patients.

Methods and Materials: A hospital-based cross-sectional study, conducted in a Tertiary care hospital, Salem. A total of 110 participants attending the outpatient department of a tertiary care hospital were included in the study. The study period was between March to June, 2024. Results: The majority of the study participants belonged to the age group of 36-49 years (60.5%), 63.0% males and 65.5% belonged to rural region. Maximum number of the study participants had recuurent seizure for which phenytoin dose of 200 to 400 mg per day was given. The duration of phenytoin consumption directly corelates with the chronic toxicity with few having truncal ataxia cerebellar atrophy and nystagmus.

Conclusion: phenytoin being a efficacious drug the side effects directly corelate with serum phenytoin levels and dose exceeding 400mg per day with a chronic duration of intake more than 2yrs.

Keywords:

Phenytoin, Cerebellar Ataxia, Nystagmus

Assessment of the Knowledge, Attitude, Practice among Patients with Hypothyroidism in a Tertiary Care Hospital at Puducherry

N. Bharath Kumar
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Abstract:

Background: Hypothyroidism is a commonest endocrine disorder globally. The awareness of the patient regarding the disease and treatment is vital.

Objectives: To assess the knowledge, attitude, practice among patients with hypothyroidism in a tertiary care hospital at Puducherry.

Material and Methods: The present study was cross sectional study carried out among hypothyroid patients more than 18 years of age attending to the outpatient department, department of general medicine. The study period was 3 months. Informed consent was obtained from all the participants included into the study. The sample size was estimated to 200. The data was collected in a semi structured questionnaire. Statistical analysis was done using descriptive statistics.

Results: 122 (61%) had known the shape of thyroid. 144 (72%) had known the location of thyroid gland. 102 (51%) had known the hormones responsible for hypothyroidism. 84 (42%) had known the relation between TSH and hypothyroidism. 164 (82%) reported that they took thyroid medications regularly. 130 (65%) reported that they sometime miss the doses. 148 (74%) reported that they take medication 30 to 60 minutes prior to breakfast.

Conclusion: With regard to practice, certain recommended practices like checking TSH levels were poor. Increasing the knowledge in aiding the better practice among the participants.

Keywords:

Hypothyroid, Knowledge, Attitude, Practice, Health Education, Symptoms, Diet

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A Case of Honey Bee Sting Causing Acute Myocardial Infarction – Kounis Syndrome

Dr. Vuggam Srikanth
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. K Kirubhakaran
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. G. Anandkumar
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

ntroduction: KOUNIS SYNDROME, also known as "ALLERGIC ANGINA" or "ALLERGIC MYOCARDIAL INFARCTION" or "CORONARY HYPERSENSITIVITY SYNDROME" is the concurrence of acute coronary syndrome induced by various conditions, drugs, environmental exposures (insect bites) ,foods & coronary stents.

Case Report: A 55year old male was bought to ER with complaints of honey bee sting all over the body, mainly over SCALP, FACE, CHEST. ECG was taken and showed ST ELEVATION in II, III, aVF, with ST DEPRESSION in I, aVR, aVL, V1, V2 corresponding to RVMI.

Conclusion: KOUNIS SYNDROME can be diagnostic challenge. It must be considered when a patient devolpos ACS shortly after a known trigger, in our case it was HONEY BEE STING. Patient may benefit from anatomic coronary testing to rule out TYPE II & TYPE III KOUNIS SYNDROME. Unless in anaphylactic shock, epinephrine should be avoided to prevent coronary vasospasm. IV Anti histamines should be the preferred allergic management.

Keywords:

Allergic Angina, Allergic Myocardial Infarction, Kounis Syndrome, Coronary Artery Spasm, Emergency Management

Assessment of Knowledge, Attitude and Practice towards Anaemia in Adult Female Patients in a Tertiary Care Centre in Puducherry – A Cross Sectional Study

Dr. Kondugari Mrudula Theressa
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Abstract:

Background: Anaemia is considered to be the most common nutritional deficiency worldwide. Inappropriate knowledge and indifferent attitude regarding healthy eating among females result in deterioration of their anaemic state

Objectives: To assess the Knowledge, Attitude and Practice towards Anaemia in adult female patients attending General Medicine OPD in Sri Venkateshwaraa Medical College Hospital and Research Centre, Ariyur, Puducherry.

Material and Methods: The present study was cross sectional study carried out among the adult female patients attending the outpatient department, department of general medicine. The study period is of 3 months. Patients with hereditary anaemia, chronic illnesses were excluded. Informed consent was obtained from all the participants participated in the study. The sample size was estimated to 200. The data was collected in a semi structured questionnaire. Statistical analysis was done using descriptive statistics.

Results: 83.5% had known about anaemia, 76.5% had known about symptoms and 74% the causes. 77% had known iron rich foods. 84.5% thought anaemia to be serious health problem. 73.5% interested in knowing their anaemic status. 67.5% were willing to take medication for anaemia. Only 39% thought they can be anaemic. 78% wash hand with soap after defecation. 25.5% regularly skipped some meal.

Conclusion: Addressing the knowledge gap regarding food interactions is vital as many had reported to consume coffee/ tea alongside food and only fewer proportion were suspecting anaemia in them which again is barrier to screening. Only few had reported to eat green leafy vegetables/fresh meat.

Keywords:

Anaemia, Knowledge, Attitude, Practice, Iron Deficiency, Iron Folic Tablets, Haemoglobin

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A Study of Electrocardiographic Changes in Acute Cerebrovascular Accidents

Dr. Jai Mangla
Chettinad Hospital & Research Institute, Chennai, India

Dr. G. Ashok
Chettinad Hospital & Research Institute, Chennai, India

Abstract:

Cardiac abnormalities occur in 60 to 70 percent of patients after stroke. The most common disturbance include ECG abnormalities, cardiac arrhythmias, and myocardial injury and dysfunction distinguishing cardiac abnormalities directly caused by stroke. More importantly, cardiac disturbances are the most common cause of death in stroke accounting for up to 6 percent of unexpected death during the first month. The severity of the neurological injury is strongly associated with the presence of left ventricular dysfunction. Similarly, diastolic dysfunction is also common after SAH, is associated with the severity of the neurological injury, and maybe the cause of pulmonary edema seen in these patients. To study the incidence and pattern of ECG changes in a patient with cerebrovascular accidents To assess the relation of ECG changes in an acute cerebrovascular accident to the location of the cerebral lesion.

Keywords:

Acute Cerebrovascular Accidents

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Knowledge, Attitude and Practice towards Chronic Kidney Disease among Type-2 Diabetes patients in Tertiary Care Centre, Puducherry – A Cross Sectional Study

Dr. Arun Kumar. G
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Abstract:

Introduction: Globally the seventh-leading cause of death is Type-2 Diabetes Mellitus. It is estimated worldwide that approximately 1 in 11 adults have diabetes. One of the major complications of Diabetes Mellitus is chronic kidney disease. This study is aimed to assess the Knowledge, Attitude and Practice towards Chronic Kidney Disease among Type 2 Diabetes Mellitus patients

Methods: Hospital based Cross sectional study conducted among 190 Diabetes patients above 18 years of age by Convenience sampling. Data collected was entered in Excel and analysis was done using SPSS software. Quantitative data was explained using Mean, Frequency and Proportion. To find the association Independent 't' test was used with p value <0.05.

Results: Mean Age of the participants was 54±9 years. Male respondants were higher 111 (58%) compared to Female 79 (42%). The mean Knowledge score was 4.83 (SD±4.07) out of 15, Attitude score was 7.22 (SD±2.07) out of 10 and Practice score was 1.81 (SD±1.82) out of 7. Majority of participants 128 (67.4%) had low level of Knowledge and 147 (77.4%) had low level of Practice. Positive Attitude is seen in 156 (82.1%) of participants towards CKD. There is significant association between Employment status and Practices of Diabetes patients towards CKD with p value 0.044 ($p<0.05$)

Conclusion: Results revealed Diabetes patients have good attitude but poor knowledge and practices towards Chronic Kidney Diseases. This concludes that there is alarming need to improve awareness atleast amongst the population at risk of getting complications like CKD. Also to promote better compliance of patients towards drug, exercise and drug regimen.

Keywords:

Diabetes, Chronic Kidney Disease, Renal Failure

ISBN: 978-93-92106-62-0

Nonalcoholic Fatty Liver Disease in Patients with Type 2 Diabetes Mellitus and Its Association with Cardiovascular Disease- An Observational Study

Dr. Manideep Chowdary
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. S R Ranga Bashyam
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. S Moogaambiga
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Introduction: Non-alcoholic fatty liver disease (NAFLD) is a spectrum of liver disease ranging from hepatic steatosis (fatty liver) to non-alcoholic steatohepatitis (NASH) that is associated with inflammation. The major risk factors for NAFLD are obesity and diabetes. Insulin resistance, the pathogenic driver of the metabolic syndrome, refers to a constellation of features such as overweight/obesity, glucose intolerance, dyslipidemia, and hypertension, all of which are important risk factors for cardiovascular disease (CVD).

Aim & Objective: To find out the prevalence of NAFLD among patients with type 2 diabetes mellitus and to detect the association of NAFLD with cardiovascular disease in them.

Methodology: A hospital-based observational study, conducted in a Tertiary care hospital, Salem. A total of 150 participants attending the outpatient department of a tertiary care hospital were included in the study. All the patients above the age of 18 years with type 2 Diabetes were included in the study. The study period was between January to April 2024. A consecutive sampling method was used to enroll the patients in the study. Details obtained about socio-demographic profile and Lipid profile via pre designed semi structured questionnaire.

Results: Out of 150 patients, 39 (26.0%) were found to have Non-alcoholic fatty liver disease (NAFLD). The most common ultrasonographic grade of NAFLD was grade I (mild) fatty liver disease (21.0%) followed by grade II (moderate) fatty liver disease (9.29%). Cardiovascular disease was not found to be significantly associated in diabetic patients with NAFLD.

Conclusion: Type 2 Diabetes mellitus patients having non-alcoholic fatty liver disease are at increased risk of developing progressive forms of the disease. There is a high prevalence of NAFLD in type 2 diabetic patients. The results from this study have established a prevalence pattern of non-alcoholic fatty liver disease in type 2 diabetes mellitus patients, drawing attention to the need to frame preventive strategies.

Keywords:

Non-alcoholic Fatty Liver Disease, Type 2 Diabetes Mellitus, Prevalence, Cardiovascular Disease

Prevalence of Hypothyroidism in Non-Alcoholic Fatty Liver Disease- A Cross-Sectional Study

Dr. Pranav Vuyyuru
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. C Arul Murugan
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Introduction: Nonalcoholic fatty liver disease (NAFLD) is one of the most common causes of chronic liver disease. NAFLD has become the leading cause of liver disease globally. Hypothyroidism is a major factor in the development of NAFLD. The thyroid hormone is the main regulator of energy metabolism, metabolic derangements are suggested to be the main cause of NAFLD. Considering this evidence, the study was conducted to investigate the association between thyroid dysfunction and NAFLD.

Objective: To estimate thyroid function in patients of NAFLD and to study the prevalence of hypothyroidism in patients of NAFLD.

Methodology: A hospital-based cross-sectional study, conducted in a Tertiary care hospital, Salem. A total of 100 participants attending the outpatient department of a tertiary care hospital were included in the study. The study period was between January to April 2024. All Patients above 18 years of age with NAFLD were enrolled in the study. Patients with chronic hepatitis B or C, hemochromatosis, taking iodine, antithyroid drugs or thyroid hormones, chronic alcoholic liver disease, diabetes mellitus, and intake of drugs like dopamine, corticosteroids, amiodarone, and phenytoin were excluded from the study. Detailed history and clinical examination was conducted on all patients and routine investigations and thyroid function test (free T3, free T4, and TSH) were done.

Results: The prevalence of hypothyroidism was 17.0% in patients with NAFLD. Of the patients diagnosed with NAFLD, 49.0 % had grade 1, 42.0 % had grade 2, and 9.0 % were having grade 3 fatty liver. Free T4 and serum TSH levels had an association with increasing grades of fatty liver. Therefore, a statistically significant association was found between hypothyroidism and NAFLD.

Conclusion: TSH may play a critical role in development and progression of NAFLD and thyroid replacement may reverse fatty infiltration of liver. Early treatment with thyroxine can prevent the progression of the fatty liver and grave consequences such as nonalcoholic steatohepatitis and cirrhosis.

Keywords:

Nonalcoholic Fatty Liver Disease (NAFLD), Hypothyriodism, TSH, Prevalence

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Assessing Pulse Pressure and Proportional Pulse Pressure as Predictors Among Heart Failure Patients with Reduced Ejection Fraction

Dr. L. Anjana
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. R. Shanmuga Sundaram
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. Pravin Selvam
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Heart failure is a complex clinical syndrome that can result from any structural or functional cardiac disorder that impairs the ability of the ventricle to fill or eject the blood. It has become the final outcome of all heart diseases nowadays. It can be diagnosed by history, symptoms, signs from the patients. It can also be estimated by pulse pressure, proportional pulse pressure in setups where the cardiologists are not available and facilities (echocardiography) are absent. It can help in finding the severity of heart failure in patients with reduced ejection fraction.

Pulse pressure, proportional pulse pressure are the non-invasive and patient friendly approaches to estimate the ejection fraction. Pulse pressure is calculated by subtracting the systolic blood pressure and the diastolic blood pressure. Proportional pulse pressure is measured by dividing the pulse pressure by the systolic blood pressure.2D –Echocardiography is also done for calculating the ejection fraction among the heart failure patients. Ejection fraction calculated by these methods (pulse pressure and proportional pulse pressure) correlate with the ejection fraction by 2D-ECHO (echocardiography).

Keywords:

Pulse Pressure, Proportional Pulse Pressure, Heart Failure Patients, Ejection Fraction

Cushing's Syndrome

Dr. L. Anjana
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Introduction: Cushing's syndrome is a rare disease. It affects almost 1-2 persons per 1,00,000 population per year. Women are more prevalent. It is caused due to chronic exposure to glucocorticoids. Eg. ACTH dependent causes like pituitary adenoma and also ACTH independent causes like adrenocortical adenoma or carcinoma or by the exogenous administration of glucocorticoids.

Case Presentation: Mrs. Veerammal, 37 years old, presented with the complaints of amenorrhoea, abdominal distension, abdominal pain for about 5 months. Patient had breathlessness for 5 months which was intermittent. She had skin lesions over the abdomen and legs. She was a newly diagnosed hypertensive. Her vitals were stable. She had history of over the counter intake of steroids for about 8 months. She had clinical features like moon face, buffalo hump and purplish striae all over the abdomen.

Investigations were done and it showed elevated total counts and was started on antibiotics and symptomatic treatment was given. Urine pregnancy test was found to be negative.USG abdomen and pelvis showed mild hepatomegaly with grade -1 fatty liver. Her thyroid profile test was also normal. She was found to have Tinea incognito and was treated with oral fluconazole. She was tested for serum cortisol and was found to be very low. She was started on oral steroids and patient became symptomatically better.

Discussion: From this case, we can observe that the patient had exogenous intake of steroids for a long time and had developed cushingoid features. And her serum cortisol level was found to be very low. Other parameters were normal. Thus it was a case of Cushing's syndrome. She was started on oral steroids and was symptomically better on discharge and follow up also.

Conclusion: Thus Cushing's syndrome caused by several factors can be easily diagnosed at an early stage and treated. And so complications like diabetes mellitus, dyslipidemia, immunosuppression, depression, thrombosis and osteoporosis can be avoided.

Keywords:

Cushing's Syndrome, ACTH Dependent

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A Case of Acute Onset Chorea Secondary to Chronic Kidney Disease

Dr. Vijay Yaswanth Reddy Bad
Saveetha Medlical College and Hospital, Chennai, India

Abstract:

Introduction: Uraemic striatopallidal syndrome is characterised by acute or subacute onset of either parkinsonism (if mainly internal globus pallidus involvement) or chorea (with mainly external globus pallidus involvement).' It usually occurs in patients receiving haemodialysis for diabetic kidney disease, but it can occur in earlier stages of chronic kidney disease or from other causes. We hereby report a case of acute onset chorea in a hypertensive elderly male with End Stage Renal Disease (ESRD).

Case Report: A 57 year old hypertensive male, a known case ESRD for the past 4 years came to neurology opd with acute onset of choreiform movements of all four limbs. The movements started 2 days prior to OPD visit and was predominantly distal. The movements were random, jerky, purposeless and were partially suppressible. On standing and walking, the choreic movements aggravated and disappeared in sleep. All other CNS examination including higher mental functions , cranial nerves motor, sensory, cerebellum were unremarkable except for generalised hypotonia. Initial lab investigations showed capillary blood glucose of 164 mg/dl and renal function test revealed urea of 194 mg/dl and creatinine of 15 mg/dl. Nephrologist was consulted and hemodialysis was initiated. Simultaneously we started him on Tetrabenazine 12.5 mg twice daily, oral haloperidol 1.5 mg twice daily, and clonazepam 0.25 mg at night. After hemodialysis and initial oral drugs for chorea his movements subsided. Magnetic Resonance brain imaging was done which showed T2/FLAIR hyperintensities involving bilateral ganglio-capsular regions consistent with lentiform fork sign suggesting uremic encephalopathy. Patient's chorea disappeared after two cycles of hemodialysis.

Conclusion: Chronic kidney disease is well known to be associated with a wide spectrum of movement disorders. These are uncommon but result from the sensitivity of the basal ganglia to metabolic disorders. The uraemic striatopallidal syndrome is one rare example, presenting with a typical pattern of lentiform involvement on brain MRI: the lentiform fork sign. It is important for neurologists to be aware of these complications given their potential for reversibility.

Keywords:

Acute Onset Chorea Secondary, Chronic Kidney Disease

An Interesting Case of Disseminated Tuberculosis in Immunocompetent Adult Male

Dr. Jeyaraman Sai Pritam
Saveetha Medlical College and Hospital, Chennai, India

Abstract:

Introduction: Extrapulmonary tuberculosis may involve in any organ system, including the spine. Potts disease accounts for a small percentage of all tuberculosis cases. While skeletal tuberculosis accounts for almost half of extra- pulmonary tuberculosis. Among spinal tuberculosis patients only a 5% suffer from concomitant psoas abcesses. A high index of suspicion must always be present, especially when other diseases are present, because there is usually considerable signs and symptoms overlap between them. Typical presentation is non specific, posing a challenge for diagnosis.

Case Report: 52 years old male was admitted with c/o fever on and off for 1 month. C/o lower back pain for 2 months. Gradually progressive and aggravated on sitting straight and bending forward and relieved on rest. C/o decreased appetite for 1 month. Chest X-ray showed military pattern. MRI LS spine showed extensive paradiscal destruction involving the L5, S1 vertebral bodies with pre- paravertebral soft tissue thickening-? Pott's spine. CT abdomen showed Right Periureteric fat stranding with diffuse ureteric wall thickening and circumferential irregular wall thickening of the small capacity bladder-? genitourinary tuberculosis. A fairly defined hypodense collection epicentered in the right iliacus with extension into iliopsoas muscle- Likely chronic collection/abscess. C-arm guided biopsy was done and sent for gene expert and was found to be positive and sensitive to rifampicin. Psoas assess was drained under usg guidance and sent for gene expert and cytology, showed positive for Ziehl Nelson stain. Patient was started on ATT HRZE. Patient improved symptomatically and discharged. Serial follow up of the patient was done and his clinical condition improved.

Conclusion: Disseminated tuberculosis is a life threatening condition with reported mortality of up to 30%[1]. Presentation could be atypical hence clinicians should therefore have a high index of suspicion so as to promptly diagnose the condition and offer appropriate treatment.

Keywords:

Acute Onset Chorea Secondary, Chronic Kidney Disease

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Effect of EECP (Enhanced External Counter Pulsation) on Left Ventricular Function as Measured by Echocardiography using Strain

Dr. Sama Akber
Oxymed Hospital, Chennai, India

Abstract:

Aims and Objectives: To assess the effects of full course of EECP therapy on LV function using strain echocardiography on patients not amenable to medical treatment or percutaneous revascularization procedures.

Methods: Patients with coronary artery disease and refractory angina pectoris despite invasive/surgical and pharmacological treatment were enrolled in the study by invitation. They were had baseline evaluation and enrolled into a course of 35 sittings of EECP after meeting the required inclusion criteria. At baseline their ejection fraction by 2 D echo and Global longitudinal strain were calculated. This was again reassessed after completion of the course of treatment.

Results: There were 50 participants in the study population, being predominantly male with an average age of 54 years. The majority of the population were diabetic - 68% (n=34) and hypertensive 78% (n= 39). All the participants included in the study had undergone some form of revascularization. The baseline EF vs Post EECP EF (40.6% vs 47.64 % p <0.001). The GLS pre EECP vs post EECP (-15.98% vs -17.36%, p < 0.001).

Conclusion: The present study showed benefit to all the participants undergoing EECP therapy. This was further made clear with the application of GLS as a additional echocardiographic parameter along with traditional 2D echocardiographic LV function.

Keywords:

EECP, Enhanced External Counter Pulsation, Left Ventricular Function, Echocardiography

A Rare Case of 84 Yrs Elderly Female with AV Septal Defect

Dr. Arun Babu. V
Chettinad Hospital & Research Institute, Chennai, India

Dr. Durga Devi. M
Chettinad Hospital & Research Institute, Chennai, India

Abstract:

Atrial Septal Defect (ASD) and VSD (ventricular septal defect) is one of the most frequently congenital heart diseases in children. We report a rare case of a 84-year-old woman admitted to hospital with dyspnea and orthopnea insidiously progressing over the preceding 5 years and becoming severe with dyspnea on minimal activities, orthopnea and paroxysmal nocturnal dyspnea, in the last 3 weeks. The transthoracic echocardiogram revealed an atrial septal defect ostium secundum type and small perimembranous VSD,with left-to-right shunt, severe tricuspid insufficiency, severe pulmonary hypertension with preserved biventricular function. With diuretic therapy optimization the patient showed symptomatic improvement. This present case represents an unusual, rare and very late presentation of an atrial and ventricular septal defect in elderly female pt, which is usually diagnosed at the mild adult age. Our patient lived symptom-free for over 78 years.

Keywords:

Atrialventricular Septal Defect, Congenital Heart Diseases, Diuretic Therapy

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A Needle in a Haystack- Ectopic Parathyroid Adenoma, A Rare Case of Acute Pancreatitis (Endocrine and diabetes mellitus)

Dr. Pavithra P
Madras Medical College, Chennai, India

Dr. Sudhagar DM
Madras Medical College, Chennai, India

Dr. Dhalapathy MCH
Madras Medical College, Chennai, India

Abstract:

Objective: causes of acute pancreatitis are diverse, among which gallstones and alcoholism are the leading causes. One such rare cause is hyperparathyroidism with hypercalcemia. This causative association between hypercalcemia and pancreatitis is suggested by the fact that parathyroidectomy prevents the recurrence of pancreatitis in patients with hyperparathyroidism. Here we report a rare case of parathyroid adenoma, which presented with acute pancreatitis as its initial manifestation.

Materials and Methods: A 29 old Antenatal mother, who is G2P1L1(23 weeks of gestation), who is an overt diabetes mellitus on insulin presented with h/o epigastric pain and vomiting for 5 days, s.amylase/lipase -1400/2340, USG abomen shows b/l medullary nephrocalcinosis, MRI abdomen shows f/s/o acute on chronic pancreatitis .patient had previous h/o diagnosis of acute pancreatitis during her previous pregnancy which was managed conservatively. Now patient was diagnosed as acute on chronic pancreatitis. On evaluation,s.ca-14.5 s.po4 -2.2, S.PTH -440, Vit D-15.48ng/ml, in view of primary hyperparathyroidism USG neck was taken which was normal. So At high risk Tc99sestamibi scan was taken which shows ectopic (pre aortic) parathyroid ADENOMA in the mediastinum. Patient was diagnosed as a case of ectopic parathyroid ADENOMA causing acute on chronic pancreatitis. Patient was refered to surgical endocrinology.

Result: Patient was taken for OT and B/L neck exploration and sternotomy with ectopic parathyroidectomy was done, after 24hrs post op Pth -57.1, s.Ca-10.9,s.po4-2.7 after 3 days s.pth-44,s.ca-8.6,s.po4-2.9. post op maternal USG shows fetal growth according to gestational age. After post op insulin requirement coming down.

Conclusion: Considering the hazards of delayed diagnosis of acute pancreatitis, awareness of infrequent causes and unusual presentation is of paramount importance. In primary hyperparathyroidism if USG neck is normal then go for other modalities to look for its ectopic location as surgery can completely cure the disease.

Keywords:

Haystack- Ectopic Parathyroid Adenoma, Acute Pancreatitis, Endocrine and diabetes mellitus

Narayana Health

Exploring Cardiac Complications in Gaucher's Disease: A Rare Phenomenon

Dr. Revathi K
Narayana Hrudayalaya Hospital, Bengaluru, India

Dr. Murali Mohan B V
Narayana Hrudayalaya Hospital, Bengaluru, India

Abstract:

Background: Gaucher's disease, one among the most common lysosomal storage disorder, is an autosomal recessive inborn error of metabolism characterized by the toxic accumulation of glucocerebroside lipids within multipleorgan. It results from mutation in the GBA1 gene, leading to deficient glucocerebrosidase activity within lysosomes. There are 5 known types of Gaucher disease: type 1, type 2, type 3, perinatal lethal, and cardiovascular type or type 3C (where the primary concern is calcification of heart valves). Cardiac involvement is very rare in Gaucher's disease.

Case Summary: Our patient is a 20 year old female, diagnosed with Type 3C cardiac phenotype Gaucher's disease at the age of 16 years and has been on enzyme replacement therapy (once in every two weeks), since then. She was tolerating the treatment well and was asymptomatic until January 2024, when she developed complaints of dry cough and episodic chest pain of 5 days duration and difficulty in breathing with orthopnea and episodes of palpitation for 1 day, with which she presented to our hospital.

Cardiac examination revealed ejection systolic murmur in aortic area radiating to bilateral carotids and mid diastolic murmur in the mitral area.

Chest x ray showed calcified ascending aorta with no evidence of cardiomegaly. ECG showed sinus rhythm, normal PR interval, left ventricular hypertrophy with strain pattern. ECHO showed significant aortic stenosis with thickened and calcified ascending aorta, stenosed carotid origin and mild MS with good biventricular function and normal pulmonary artery pressures. CT angiogram revealed minor CAD, circumferential calcification of thoracic aorta with moderate to severe luminal stenosis of ascending aorta and the arch with normal appearance of abdominal aorta. Total calcium score was 94. Patient underwent surgery for the same, Apico-aortic graft with 19mm mechanical valve and conduit to innominate artery with CABG (RSVG to LAD). Post operative period went uneventful. She was symptomatically better and was discharged on POD 15.

Conclusion: Gaucher disease type 3c (GD3c) is a rare subtype of the sub-acute/chronic neuronopathic GD3, caused by homozygosity for the GBA p.Asp448His (D409H) mutation. GD3c is characterized mainly by cardiovascular and neuro-ophthalmological findings. Type 3 GD is characterized by primary central nervous system disease with childhood onset, a more slowly progressive course, and survival into the third or fourth decade. The efficacy of enzyme replacement therapy with mannose terminated recombinant human acid beta glucosidase, in symptomatic relief has definitively been demonstrated. Most symptoms are reversed by IV enzyme replacement (60IU/Kg every other week). However, the enzyme replacement does not alter the progression of cardiac and neurological disease. Though overall prognosis is poor, these patients are benefited by palliative surgeries in case of severe organ involvement.

Keywords:

Gauchers Disease, Type 3C Gauchers, Ascending Aorta Calcification

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A Case of Acromegaly due to Pituitary Microadenoma Complicated by Cerebrovascular Accident

Dr. Venkat Bhabu. G
Madras Medical College, Chennai, India

Dr. Hariharan. C
Madras Medical College, Chennai, India

Dr. Yogesh. S
Madras Medical College, Chennai, India

Abstract:

Introduction: In acromegaly patients, excessive growth hormone (GH) and IGF-1 causes various systemic complications like ischemic heart disease, cerebrovascular accident, systemic hypertension, insulin resistance, neoplasms. The most common is cardiovascular complications. Ischemic stroke in acromegaly patients can occur due to both local and systemic effects. These complications leads to premature mortality and decreased quality of life in acromegaly patients.

Case Report: A 36 year old male presented with chief complaints of difficulty in using left upper and lower limb and deviation of angle of mouth to the right and slurring of speech. O/E Patient had prominent forehead, prognathism, acral enlargement and acanthosis.

NCCT brain showed subacute infarct in right MCA territory. MRI brain revealed encephalomalacia in right FT region, thromosis in right ICA, pituitary microadenoma.

GH- 5.7 ng/ml

IGF-1- 494 ng/ml

On growth hormone suppression test, GH is not suppressed (1.37 ng/ml).

No other pituitary hormone deficiency.

Echo and CV Doppler normal.

Beta 2 glycoprotein antibody, Anti cardiolipin antibody and lupus anticoagulant were negative.

Factor V Leiden mutation was negative. Protein C, protein S, Anti-thrombin 3 levels were normal.

Other acromegaly complications screened were negative.

In view of pituitary microadenoma and modest elevation of IGF-1(< 2 times the upper limit of normal), patient was started on trial of Cabergoline.

After 6 months, IGF-1 level - 236 ng/ml, growth hormone suppression test is normal (0.88 ng/ml).

Patient is maintained on medical management and on regular follow up.

Conclusion: The active disease is associated with increased mortality but the disease control has reduced the mortality risk equivalent to normal population. Early diagnosis and appropriate treatment to maintain target GH levels is critical to reduce the incidence of systemic complications, thereby improving the quality of life in acromegaly patients.

Keywords:

Acromegaly, Pituitary Microadenoma, Cerebrovascular Accident, Growth Hormone (GH), IGF-1

Thyrotoxicosis- A Typical Presentation

Dr. Chellagundla Dinesh Chandra
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. K. Srinivasa Galu
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

Introduction: Thyrotoxicosis refers to a clinical entity that results from excessive thyroid hormones. It has multi systemic involvement and varied presentation. Usually they present with weightloss, heat intolerance, palpitations, tremors and diarrhea. But they can have unusual presentations like status epilepticus, atypical chest pain, dyspnea on exertion, cerebral infarct, choreoathetoid movements etc.

Case Report: A 27 year old male presented with history of right sided weakness, slurring of speech and 2 episodes of generalised tonic clonic seizures followed by an episode of transient ischemic attack. On examination patient was found to have widespread vitiligo, diffuse thyroid swelling and protrusion of eyes. Clinical provisional diagnosis of stoke in young was made.

MRI brain was done in the emergency department showed acute infarct in lentiform nucleus and corona radiata. Transthorasic echocardiography showed mild mitral valve prolapse, mild mitral regurgitation, left ventriculae ejection fraction-60%. Carotid doppler shows no significant stenosis. S.TSH-0.006uIU/L, S.FT4->7.77ng/dl, T3-.6.51, T4-.>24.86 IU/L, Anti TPO-384.5 IU/ML

The patient was started on heparin and warfarin in view of suspecting embolic stroke. Since thyrotoxicosis and coexisting vasculitis can have an unsual presentation of acute infarct, patient was started on parenteral Glucocorticoids and tablet carbimazole.

Discussion: Patient was found to have cerebro vascular accident with right sided weakness. On evaluation found to have features of thyrotoxicosis, graves ophthalmopathy, vitiligo. Diagnosis of auto immune polyendocrinopathy type 3 was considered. After starting treatment patient improved drastically.

Conclusion: Patient with thyrotoxicosis presents with varied presentation and can mimic many other conditions. Picking up the atypical presentation and having biochemical confirmation not only avoids mistreatment but also provide drastic improvement in life.

Keywords:

Thyrotoxicosis

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Familial Partial Lipodystrophy Type 2 Dunnigan

Dr. N. Gokulakanna
Madras Medical College, Chennai, India

Dr. Hariharan. C
Madras Medical College, Chennai, India

Dr. R. Sridhar
Madras Medical College, Chennai, India

Abstract:

Objective: Familial partial lipodystrophy (FPLD) is a rare genetic disorder characterised by the selective loss of adipose tissue with prevalence as low as 1 in 1 million. It is associated with insulin resistance, lipoatrophic diabetes, dyslipidemia with severe hypertriglyceridemia, hypertension and hepatic steatosis. Our aim is to highlight the approach to the diagnosis of rare lipid disorders and how its early detection and management could play a crucial role in preventing premature ASCVD related deaths and acute pancreatitis.

Materials and Methods: A 16 year old female with no previous comorbids presented with complaints of abdominal pain and vomiting for 4 days, breathlessness and reduced responsiveness since morning. CBG was 431and GCS -10. Acanthosis nigricans was seen in flexures with features of hirsutism. BP-160/100. Urine acetone was positive. ABG showed acidosis. DKA managed and treated accordingly. Lipid profile showed triglycerides -3831mg/dl with high VLDL and low HDL. Fasting C peptide was normal. Anti-GAD and IA2 was negative. After ruling out secondary causes of hypertriglyceridemia, genomic analysis was done showing mutation in LMNA+ gene diagnosed as familial partial lipodystrophy type 2. Patient was intubated in view of worsening GCS, DKA managed, extubated post AKI recovery and then the patient was started on fibrates and statins.

Results: The patient recovered from DKA. AKI was resolved, triglyceride levels were reduced and came to within normal limits in 2 weeks with the help of fibrates and statins.

Conclusion: The case brings to light a relatively common presentation i.e. diabetic ketoacidosis caused by insulin resistance due to a rare lipid disorder instead of the more common type 1 diabetes mellitus in the given age group, thus posing a diagnostic challenge to the treating physician.

Keywords:

Familial partial lipodystrophy (FPLD), Genetic Disorder

A Rare Case Report of Kartagener Syndrome without Infertility Diagnosed Later in Life

Dr. Siddarth S Patil
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. G. Anbazhagan
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

Introduction: The Kartagener syndrome consists of classic triad of situs inversus, bronchiectasis and recurrent sinusitis. Male patient with this syndrome are almost invariably infertile because of immotile spermatozoa. This case is reported for uncommon occurrence of this syndrome without infertility.

Case Report: A 50 year old male, non smoker, non alcoholic, born to non consanguinous parents came with complaints of Shortness of breath for 1 month, fatigue since 1month, cough with expectoration since 1month. He had similar complaints on and off since childhood. On examination Vital parameters are within normal limits. Physical examination pallor present apex beat on right 5th intercostal space. On auscultation bilateral wheeze+ and right basal crackles heard with heart sounds best heard on right side of chest. Xray showed dextrocardia, Hrct chest showed dextrocardia with right Lower lobe opacities suggestive of bronchiectasis. Ct pns showed chronic maxillary sinusitis with sinonasal polyposis.

Conclusion: Kartagener syndrome is form of PCD. It must be suspected in all patients with Chronic sinusitis, bronchiectasis and dextrocardia. Infertility is common, The fertility of the patient did not exclude the diagnosis of PCD.

Keywords:

Kartagener Syndrome, Infertility, PCD

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Yamaguchi Syndrome-Aces of Spade: A Hidden Subterfuge of Ischemic Heart Disease

Dr. Pooja S
Madras Medical College, Chennai, India

Dr. Ganapathy
Madras Medical College, Chennai, India

Dr. Karthikeyan
Madras Medical College, Chennai, India

Dr. Ranjith K Robert
Madras Medical College, Chennai, India

Dr. Prathish Kumar
Madras Medical College, Chennai, India

Abstract:

Yamaguchi syndrome, also known as Apical Hypertrophic Cardiomyopathy, is a variant of cardiomyopathy that affects the apical region of the left ventricle. Apical hypertrophy is often misdiagnosed as Acute Coronary Syndrome. It is Autosomal Dominant with majority of mutations in genes encoding for the sarcomere. It has a favourable long term prognosis with lower mortality and complications compared with other forms of cardiomyopathy.

Keywords:

Left Ventricle, Acute Coronary Syndrome

ISBN: 978-93-92106-62-0

A Case of Restrictive Cardiomyopathy due to Amyloidosis

Dr. Puvanesh S
Madha Medical College and Research Institute, Chennai, India

Abstract:

Objective and Aim: Amyloidosis refers to a group of disorders characterised by extracellular deposition of insoluble protein fibrils in tissued and organs. Here I am presenting a case of amyloidosis presenting as restrictive cardiomyopathy. To highlight a rare case of amyloidosis and to highlight the difference in management of atrial fibrillation in amyloidosis patients.

Case Study: A 39 yr old female presented with breathlessness for 3 days following her brother's death. She also had history of palpitations. On examination, patient was in atrial fibrillation and cardiogenic shock and treated with inotropes, nasal O2, salt and fluid restriction, INJ amiodarone 150 mg iv over 10 mins 1mg/min in infusion, tab amiodarone 100mg bd, tab lasix, inj. Heparin 5000 u iv q 6 hrly. After stabilisation, echo and cardiac MRI revealed restrictive cardiomyopathy with biatrial enlargement thus predisposing the patient to atrial fibrillation. With family history of SCD and suspected amyloidosis, abdominal fat biopsy was taken and sent for examination.

Result: Biopsy reports revealed greenish birefringent deposits on congo red staining and viewed with polarising microscope suggesting of amyloidosis. She was diagnosed as amyloidosis and was treated with amiodarone for atrial fibrillation since other rate controlling drugs cannot be used in amyloidosis. Unfortunately the pt succumbed to cardiac failure.

Keywords:

Amyloidosis, Restrictive Cardiomyopathy, Atrial Fibrillation, Cardiac Failure

ISBN: 978-93-92106-62-0

A Case of Late Onset Sheehan's Syndrome

Dr. Penila M
Madha Medical College and Research Institute, Chennai, India

Abstract:

Introduction: Sheehans syndrome is hypopitutarism due to ischemic necrosis of pituitary gland. It is reported that sheehans syndrome accounts for 0.5% of all known cases of hypopitutarism in females. Sheehans syndrome can present during the postpartum period or several months or years following delivery. Women with sheehans syndrome have varying degrees of hypopitutarism ranging from panhypopitutarism to only selective pituitary deficiencies. The most common intitial symptoms of sheehans syndrome are agalactia and /or amenorrhea. In some cases, the diagnosis is not made until years later, when features of hypopitutarism, such as secondary hypothyroidism or secondary adrenal insufficiency, become evident in a women who had a postpartum hemorrhage.

Aims and Objectives: most patients with sheehans syndrome have non specific symptoms such as weakness, cold intolerance, anemia which affect quality of life especially because of long diagnostic delay. These patients can remain undiagnosed or misdiagnosed for longtime and receive inappropriate treatments. Increased awareness of these condition will result in earlier diagnosis and hence better quality of life and lower morbidity and mortality.

Case Study: 50 year old female came to the hospital with complaints of altered sensorium for 3days. K/c/o hypothyroidism for past 2 months. h/o hysterectomy done immediately after 1st delivery (20years) due to PPH for which 18units of FFP, platelets, blood transfusion were done. O/E, drowsy, arousable, poorly responding to oral commands, vitals stable, S/E, CVS-S1S2+, RS-BAE+, P/A -soft, not tenter, CNS – drowsy, arousable, poorly responding to oral commands, B/L plantar withdrawal.

Keywords:

Sheehan Syndrome, Hypopituitrism, Post-Portum Haemorrhage, Amenorrhea

An Unusual Presentation of Left Atrial Myxoma

Jha Sakshi
MGM Medical College and Hospital, Aurangabad, India

Oswal Vineet
MGM Medical College and Hospital, Aurangabad, India

Udgire Prashant
MGM Medical College and Hospital, Aurangabad, India

Abstract:

Primary cardiac tumors are extremely rare and among them myxomas are the most common type. 75% of the myxomas arise from the left atrium, 20% from the right atrium and roughly 5% arise from both the atria and the ventricle. Female to male ratio of myxoma prevalence is 2:1. Its typical cluster of presentation comprises of constitutional symptoms, blood flow obstruction and tumor embolism. We herein report the case of a young female with an unusual presentation of left sided hemiplegia and complete loss of vision of the left eye. She initially was admitted under neurology, MRI scans of the brain revealed ischemic stroke. Fundus examination and OCT revealed central retinal artery occlusion of the left eye. On routine 2D Echocardiography examination, the diagnosis of large left atrial myxoma was established. Surgical resection was done.

Keywords:

Myxoma, Stroke

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Coronary Vasospasm- A Rare Side Effect of Tacrolimus in Post Renal Transplant Patient

Dr. Rajan Dilip Talele
MGM Medical College and Hospital, Aurangabad, India

Abstract:

Tacrolimus, cornerstone of immunosuppression in post kidney transplant can rarely cause coronary vasospasm 24 year old male patient with typical ECG changes and raised cardiac marker on Tacrolimus underwent thalium scan which shows non transmural infarct. Patient was treated with by calcium channel blockers and reduced dose of Tacrolimus. Later patient underwent coronary angiography which showed normal coronary angiography after treatment. this supports coronary vasospasm due to tacrolimus.

Keywords:

Tacrolimus, Vasospasm, Immunosuppression, Kidney Transplant

Case of Complicated Myocardial Infarction

Dr. Pranav. S
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Introduction: This is a case report on a case of complicated myocardial infarction. Myocardial infarction is caused by decreased or complete cessation of blood flow to a portion of the myocardium. Most myocardial infarctions are due to underlying coronary artery disease. With coronary artery occlusion, the myocardium is deprived of oxygen. Prolonged deprivation of oxygen supply to the myocardium can lead to myocardial cell death and necrosis. It can be associated with mechanical, electrical and embolic complications which further increase the mortality rate in this condition.

Aim: 1) To understand the clinical presentation of a case of myocardial infarction and importance of symptoms in diagnosis and management. 2) To understand extensive complication that arise in a case of myocardial infarction and their management.

Case presentation: 47 year old male who is a k/c/o T2DM presented with complaints of syncope

History of presenting illness: Patient was apparently normal 10 days back when he developed c/o chest pain acute in onset and consulted a local physician. ECG was taken and was treated as APD. He then again developed severe chest discomfort and was taken to another hospital where ECG was taken and was noted to be normal according to bystanders and patient was sent home. He had similar complaints intermittently and didn't seek medical attention. On day of admission patient had complaints of transient loss of consciousness. No c/o dyspnea, orthopnea, PND.

He also had c/o pain over right foot x 2 days

Past history: K/C/o T2DM x 10 years om irregular Rx, No h/o CAD, HTN, RHD, BA, TB
Family history: nil significant
Personal history: Non-smoker, No h/o alchohol consumption

O/E:

Pt conscious, oriented,
Peripheral Pulse (DP/PT) not palpable over rt foot, all other peripheral pulses felt
PR-118/min
BP-120/80 mmhg
Spo2- 95% in RA
RR- 16/min
CVS- S1S2 + No murmur
RS- B/L rales +
CNS- NFND
P/A – Soft, Non tender
ECG- sinus tachycardia, incomplete RBBB, ST depression in v2-5, T inversion in V4-6
Echo- RWMA of IW/PW/LW at basal, mid level and apical IW/LW
LA dilated (40.8mm), Mild LV systolic dysfunction (EF-48%), Mild mitral regurgitation, Trivial tricuspid regurgitation, Mild PAD, no clot, no pericardial effusion.
Chest Xray – NAD

Following evaluation patient was treated treated with antiplatelets, statins, diuretics and nasal O2.

CAG was done and showed triple vessel disease with total occlusion of proximal LCX with thrombus. PCI was deferred.

Patient further developed recurrent vpc's and developed ventricular tahycardia which was reverted with DC shock. Patient had further episodes of ventricular tachycardia and was referred to higher centre for ICD(Implantable Cardioverter Defibrillator) implantation.

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CT peripheral angiogram was done and showed complete occlusion of right prounda femoris artery, complete occlusion of right distal popliteal artery. Aggressive medical management was advised.

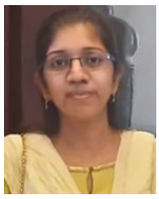
In view of recurrent ventricular tachycardia elective ICD was advised and same was performed and procedure was uneventful.

Discussion: Myocardial infarction can lead to several serious complications. These include arrhythmias, such as ventricular fibrillation, ventricular tachycardia, conduction disturbances. Heart failure and Cardiogenic shock could result. Mechanical complications like ventricular septal rupture and papillary muscle rupture may arise, potentially causing severe mitral valve regurgitation. Additionally, there is a risk of developing pericarditis, left ventricular aneurysms, and thromboembolism. Our case had ventricular tachycardia, thromboembolism affection the right leg and mild mitral regurgitation. Immediate treatment of these life threatening complications is of the upmost importance.

Conclusion: The above case report showed the importance of observation and proper clinical evaluation of a patient presenting with chest discomfort. ECG changes may not always appear at the first instance of symptoms so monitoring of patients is necessary. Recognition and immediate management of complications as they is important to improve the mortality rate in such a critical acute condition.

Keywords:

Myocardial infarction, Ventricular tachycardia, Thromboembolism, ICD (Implantable Cardioverter Defibrillator)



80 and Going Strong: Asymptomatic Ventricular Septal Defect in an Octogenarian Female - A Case Report

Dr. Arunya Elangovan
Sri Muthukumaran Medical College Hospital and Research Institute, Chennai, India

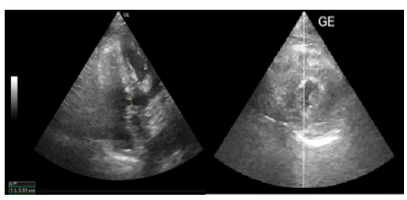
Dr. Karthikaa Saminathan
Sri Muthukumaran Medical College Hospital and Research Institute, Chennai, India

Dr. K. V. Rajalakshmi
Sri Muthukumaran Medical College Hospital and Research Institute, Chennai, India

Dr. J. D. Manoj Kumar
Sri Muthukumaran Medical College Hospital and Research Institute, Chennai, India

Abstract:

Ventricular Septal Defect (VSD) is a developmental anomaly of the interventricular septum, because of which there exists a communication between the cavities of two ventricles. VSD is a common congenital cardiac anomaly, frequently occurs in children than adults. In adults, it is observed mainly among females (56%). This condition can occur either as an isolated defect or in conjunction with other forms of congenital heart disease (presenting as a more complex lesion). In India, isolated VSD is the second most common congenital defect. The lower prevalence of ventricular septal defects in adults is due to the spontaneous closure of the interventricular septum by the age of 2 years and is unlikely to persist after 10 years of age. Consequently, VSDs in adults account for about 10% of cases, with a mortality rate of 75% by 60 years of age. Hence, it is extremely rare to find VSD in individuals beyond 60 years of age. Here we present the case of a completely asymptomatic 80-year-old female came to OPD for regular diabetic check. On examination incidentally found pan systolic murmur, subsequently her echocardiographic images showed peri-membranous type of Ventricular septal defect.



Keywords:

Adult Congenital Heart Disease, Asymptomatic Ventricular Septal Defect

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A Study on Prevalence of Cardiac Autonomic Neuropathy in Type 2 Diabetes Mellitus and use of QTC Interval in Its Prediction

Dr. Mididoddi Rasmi Priya Setty
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. S R Ranga Bashyam
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. S Moogaambiga
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Introduction: Cardiac autonomic neuropathy (CAN) invokes potentially life-threatening outcomes, especially in poorly controlled diabetic patients. It is associated with increased morbidity and mortality. CAN is associated with a poor prognosis and may result in postural hypotension, exercise intolerance, enhanced intraoperative instability, and an increased incidence of silent myocardial infarction and ischemia. Diabetics with cardiac autonomic neuropathy are more prone to sudden cardiac death probably due to silent myocardial ischemia or infarction or due to malignant ventricular arrhythmias. An association between cardiac autonomic neuropathy and QT interval prolongation was demonstrated in many studies and it may predispose to sudden death in diabetes.

Objectives: To determine the prevalence of cardiac autonomic neuropathy among Type 2 Diabetes Mellitus patients and to find the use of QTc interval in predicting it.

Methodology: A cross-sectional study was conducted in a Tertiary care hospital, Salem. A total of 52 participants, both male and female, who satisfy all inclusion and exclusion criteria, attending the outpatient department of a tertiary care hospital were included in the study. The study period was between November 2023 to April 2024. All the patients are evaluated by detailed history including duration of diabetes, symptoms of autonomic neuropathy, and relevant basic blood investigations. A battery of five autonomic function tests was done in all cases. Heart rate, QTc values, and QTc dispersion were measured among the patients.

Results: Among 52 patients, the Prevalence of CAN among type 2diabets patients was 43.0%. There was a relation between the prevalence of CAN and the duration of diabetes. QTc dispersion was significantly higher among patients with autonomic neuropathy than those without autonomic neuropathy.

Conclusion: Autonomic neuropathy is highly prevalent in long-standing diabetics and prevalence increases with the duration of diabetes. Diabetic autonomic neuropathy is associated with increased resting heart rate and prolongation of QTc intervals. QTc max was correlating with the severity of autonomic neuropathy.

Keywords:

Cardiac Autonomic Neuropathy, Type 2 Diabetes, QTc Interval, Prevalence

The Influence of Hyperuricemia, SLC2A9 Genotypes on the Development of Adverse Cardiovascular Events in Patients with Arterial Hypertension and Atrial Fibrillation

Tatyana Barysenka*
Grodno State Medical University, Grodno, Belarus

Viktor Snezhitskiy
Grodno State Medical University, Grodno, Belarus

Andrey Kopytsky
Grodno State Medical University, Grodno, Belarus

Mikhail Kurbat
Grodno State Medical University, Grodno, Belarus

Olga Gorchakova
Grodno State Medical University, Grodno, Belarus

Svetlana Miklash
Grodno University Clinic, Grodno, Belarus

Abstract:

Introduction: Over recent decades the prevalence of asymptomatic hyperuricemia (HU) has increased substantially worldwide. There are reports of asymptomatic HU in patients with various cardiovascular diseases, particularly arterial hypertension (AH) and atrial fibrillation (AF). Ongoing genome-wide association studies have demonstrated the significance of genetic predisposition to impaired purine metabolism.

Aim: The aim of the study is to assess the effect of HU and SLC2A9 gene genotypes on the development of adverse cardiovascular events (CVE) in patients with AH and AF in the medium term.

Methods: We examined 68 patients with AH and AF; mean age 55.91±8.65 years, 63 (93%) men. Depending on the presence of HU, 2 groups were formed: the 1st group included patients with AH and AF in combination with HU (n=24), the 2nd group included patients with AH and AF without HU (n=44). The sample was observed for 3 years. To determine significant signs that influence the likelihood of developing adverse CVE, Cox regression analysis was performed. $p \leq 0.05$ – to test statistical hypotheses.

Results: Unfavorable CVE were detected in 70.8% of cases in the group of patients with AH and AF in combination with HU and in 47.7% of cases in the group of patients with normal serum uric acid (sUA) levels. The C/C genotype of the SLC2A9 gene rs734553 polymorphism was significantly more common (41.7%) in patients with AH and AF in combination with HU compared to patients with normal sUA levels (6.8%) ($p<0.001$). It was found that the increased level of sUA ⩾360 μmol/l in women and ⩾400 μmol/l in men (OR 4.28; 95% CI (2.35-7.78); $p<0.001$), the C/C genotype of the SLC2A9 gene rs734553 polymorphism (OR 2.62; 95% CI (1.49-4.61); $p<0.001$) are independent predictors of the development of adverse CVE.

Conclusion: The presence of HU in patients with AH and AF increases the risk of developing adverse CVE by 4.3 times, the C/C genotype of the SLC2A9 gene rs734553 polymorphism – by 2.6 times.

Keywords:

Uric Acid; SLC2A9 Gene Polymorphism; Arterial Hypertension; Atrial Fibrillation; Survival Analysis

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A Case of Dengue Myopericarditis (Unusual Manifestation of a Common Disease)

Dr. Jai Mangla
Chettinad Hospital & Research Institute, Chennai, India

Dr. G. Ashok
Chettinad Hospital & Research Institute, Chennai, India

Abstract:

Dengue, the most common Arboviral disease transmitted globally, is caused by four antigenically distinct dengue virus serotypes (DEN 1, DEN 2, DEN 3 and DEN 4). The Dengue virus, a member of Flavivirus group in the family Flaviviridae, is a single stranded enveloped RNA virus. The infection is transmitted by infected female Aedes mosquitoes. Dengue is a worldwide condition spread throughout the tropical and subtropical zones. Nowadays as the spread of Dengue and Dengue Hemorrhagic Fever is increasing, atypical manifestations are also on the rise. There are many atypical manifestations reported in dengue involving many different systems. Cardiac manifestations are uncommon in dengue. The cases which have been reported during the episodes of Dengue Hemorrhagic Fever are cardiac rhythm disorders and pericardial involvement has also been attributed to dengue infection along with myocarditis.

Keywords:

Dengue Myopericarditis, Common Disease, Dengue Virus Serotypes, DEN 1, DEN 2, DEN 3, DEN 4

Young Male with Severe Biventricular Dysfunction as the First Presentation in an Idiopathic DCM

Dr. Priyadharshan
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. Vengadakrishnan
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Abstract:

Introduction: Dilated cardiomyopathy is a primary heart muscle disease characterized by predominantly LV failure and dilatation in the absence of coronary artery disease / valvular heart disease

Case Report: This is about a young male who presented with features of acute decompensation with complaints of shortness of breath NYHA class III, Decreased urine output and multiple episodes of vomiting.

This patient presented to the ER with above mentioned complaints to the emergency department, on arrival to the ER, he was tachypneic, tachycardic with elevated JVP. ECG done showed ventricular trigeminy.

2D echo done showed dilated LA, LV global hypokinesia of LV With severe LV dysfunction with an ejection fraction- 28%. Patient was in respiratory distress and hence shifted to ICU where he required NIV and Lasix infusion which was then transitioned to oral diuretics and was out of critical care.

As per cardiologist advice patient underwent cardiac MRI which revealed Severe Biventricular failure with LVEF 12%, RVEF18. There was no myocardial oedema buy showed delayed enhancement of LV myocardium, which indicated a sequelae to an inflammatory myocarditis, hence etiology of Dilated cardiomyopathy was due to an inflammatory insult with severe myocardial scarring. Patient was treated with ivabradine, sacubitril valsartan, Single antiplatelet and statins, carvedilol and diuretics. Patient also being a diabetic was treated with dapagliflozin and glipizide.

Conclusion: Left Ventricular failure is common among patient with Dilated cardiomyopathy whereas involvement of Right ventricle occurs very late during the course of the disease, here in my case report there is an early biventricular involvement which imparts bad prognosis.

Keywords:

Biventricular Dysfunction, Idiopathic DCM, Dilated cardiomyopathy, LV Failure and Dilatation, Ventricular Trigeminy

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The Light at the End of the Tunnel

Dr. B. Vishnu
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. G. Ranjani
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. Chandrasekar. S
Govt. Stanley Medical College and Hospital, Chennai, India

Abstract:

Introduction: Rheumatic fever is a nonsuppurative, acute inflammatory complication of group A streptococcal pharyngeal infection, causing combinations of arthritis, carditis, subcutaneous nodules, erythema marginatum, and chorea. Diagnosis is based on applying the modified Jones criteria to information gleaned from history, examination, and laboratory testing. Treatment includes aspirin or other nonsteroidal anti-inflammatory drugs, corticosteroids during severe carditis, and antimicrobials to eradicate residual streptococcal infection and prevent re infection.

Case Report: A 15 year old female no known comorbidities presented to opd with chief complaints of fever for past 20 days, swelling of joints with pain for 1 week, skin rash for past 5 days. O/E patient conious oriented responding to commands, febrile, pallor+, systemic examination was found to be normal. Routine lab investigations were sent and results obtained, Basic investigations, ecg, echo, chestxray, usg abdomen and pelvis turned out to be normal but patient had elevated crp, esr, Aso titre, upon provocating the history further the patient had h/o sorethroat around 30 days prior to the onset of fever ,which raised the suspicion of rheumatic fever ,throat cultures were sent for the patient turned to be positive for streptococcus species ,anti-dnase b titre was elevated in the patient ,then the patient was started on high dose of aspirin and penicillin prophylaxix after which patient showed drastic improvement.

Conclusion: There is no definitive diagnostic test for rheumatic fever. Recognition of the diverse clinical manifestations of the disease is essential. degree of probability Treatment with penicillin within 1 week of the onset of sore throat may prevent the subsequent onset of rheumatic fever. Antibiotics do not modify the course of an acute rheumatic attack. Acute rheumatic fever may be treated with systemic corticosteroids or supportively with nonsteroidal anti-inflammatory drugs (NSAIDs). Prophylaxis with low-dose penicillin effectively prevents recurrence.

Keywords:

Diabetes, Blood Coagulation, PT, aPTT, Cardiovascular Disease

Correlation of Serum Uric Acid as Prognostic Indicator in Myocardial Infarction in Association with Killip Scoring

Dr. Lahari B
Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India

Dr. Viswanathan K N
Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India

Dr. Sathiyanarayanan J
Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India

Abstract:

Introduction: Acute myocardial infarction is the leading cause of death and disability worldwide. Killip classification, divided into four groups to assess the degree of left ventricular dysfunction and forecast mortality, is a helpful tool for early risk stratification of acute myocardial infarction. High blood uric acid levels are a substantial, independent risk factor and indicator of serious adverse cardiovascular events.

Aim& Objective: We aimed to assess the validity of serum uric acid as a prognostic indicator of acute myocardial infarction in association with Killip's classification.

Materials and Methods: This hospital-based cross-sectional study was conducted at SMVMCH, Rural Puducherry, for six months.

Results: Of the 55 subjects, males (80%) and females (20%). The mean age was 59.4+/-10. The most common age group was 51–70 years old. A major proportion (51%) have type 2 diabetes mellitus, and (40%) have systemic hypertension. The most common type of myocardial infarction is AWMI (40%) and IWMI (31%). The majority of patients (47.3%) belong to Killip class 2, which has a 25 percent 30-day mortality rate. Killip class and 30-day mortality have a statistically significant correlation (p value0.01) with serum uric acid levels.

Conclusion: In patients with acute MI, there is a strong correlation between elevated serum uric acid levels and higher Killip classification. The combination of serum uric acid level and Killip classification is a good predictor of mortality after an AMI.

Keywords:

Acute Myocardial Infarction, Serum Uric Acid, Killip Classification

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Demographic And Clinical Presentation of Newly Diagnosed Type 2 Diabetes Mellitus Patients in Tertiary Care Centre

Dr. Koushick VK
Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India

Dr. Manokaran. C
Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India

Dr. Ram Aravind. S
Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India

Abstract:

Aim & Objectives: to assess Demographic, Anthropometric and Clinical presentation of newly detected type 2 DM at the time of diagnosis, their micro and macrovascular status .to check for presence of any correlation between Hba1c and RDW of newly diagnosed DM patients.

Methodology: This is a hospital-based study, a cross-sectional observational study. The sample size was 100 after considering necessary inclusion and exclusion criteria.

Results & Conclusion: Majority of newly diagnosed type 2 DM belong to 30–50year age group. Nearly half of them are educated and employed. Family history is present in almost all cases. Nearly three fourth of the patients had past history of covid and high BMI. Majority had HbA1c more than 7.5. Mean Hba1c was 9.24 %. Infection was most common presentation, pneumonia and UTI are commonest among them. Osmotic symptoms were seen in 9% of total population. Acute CVA was seen in 12% of population. Hypertension was the most common comorbidity associated with Newly diagnosed Type 2 DM. Dyslipidemia is seen in 6%. Neuropathy was present in 12% patients, 1 had (HBA1C <7.5%) and 11 had (HBA1C >7.5%). Retinopathy was present in 7 (7%) of patients, all patients had Hba1c >7.5, non-proliferative diabetic retinopathy. Nephropathy is seen in one fourth of the population, it is most common complication. Macroalbuminuria and microalbuminuria was present in 8 % & 19% respectively. None of them had Tripathy. Hba1c showed positive correlation with RDW.

Keywords:

Newly diagnosed Type 2DM, Demographic, Anthropometric, Clinical presentation micro and macrovascular status, correlation between Hba1c and RDW

A Puzzle of the Pleated Sheets-A Rare Case of Primary Systemic Amyloidosis

Dr. S. Dhivya
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. M. Edwin Fernando
Govt. Stanley Medical College and Hospital, Chennai, India

Abstract:

Introduction: AL amyloidosis - an acquired cause of Systemic amyloidosis has an estimated incidence rate of 10.4 cases per 1 million person-years reported across 38 countries.

Summary: A 52/M, hypertensive, post COVID had chronic fatigue, lethargy x 3 months; cough, breathlessness x 1 month. O/E, positive findings: Pallor, elevated JVP, Tachypnoea, orthopnoea, pedal edema, alopecia with multiple hypopigmented spots, Mild ascites, Firm hepatomegaly 7 cm below RCM, crepitations in bilateral basal lung zones, Gallop rhythm. Vitals-stable. Investigations showed: Anemia, Reactive leucocytosis, thrombocytosis, Renal failure with nephrotic range proteinuria, hematuria, hypoalbuminemia, normocalcemia. Chest CT: Infective changes. Abdominal imaging: gross hepatomegaly, Minimal ascites. ECHO: Heart failure with preserved EF. Patient started on diuretics, higher iv antibiotics and supportive measures with suspicion of Bronchopneumonia with RPGN. ANA -strongly positive. ENA profile, C3, C4, anti-GBM, ANCA were normal. Patient's illness worsened progressively with severe sepsis, septic shock, coagulopathy and new onset atrial fibrillation demanding mechanical ventilation. Hemodialysis was initiated. Renal biopsy- suggestive of AL Amyloidosis. Suspecting Multiple myeloma, iv Ig and Inj. Bortezomib started. Bone marrow biopsy, Flow cytometry, Serum immunotyping, Serum Protein electrophoresis, Serum free Light Chain- inconclusive of Myeloma or other light chain diseases. Daratumumab CyBorD regimen was deferred in view of severe sepsis. Though he unfortunately succumbed to cardiac arrest, the diagnosis of Primary Systemic Amyloidosis seems evident with the multi system involvement such as Cardiac, Hepatic, Renal, Skin.

Conclusion: Promising treatments are currently available for patients with AL amyloidosis. Prompt diagnosis and appropriate referral can help to improve survival and outcomes for those affected.

Keywords:

Primary Systemic Amyloidosis, AL Amyloidosis, Myeloma

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An Interesting Case of Kounis Syndrome

Dr. Kate Shubham Bhagnath
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Dr. K. Nagarajan
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Dr. K. S. Sindhya
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Abstract:

Introduction: Kounis syndrome is a rare case introduced in the year of 1991 by Kounis and Zavras. Allergic reaction triggering myocardial infarction is referred as Kounis syndrome. The pathophysiology is by release of histamine due to anaphylactic reaction, which induces coronary artery spasm and atheromatous plague rupture. This disease is frequently misdiagnosed as myocardial infarction. Intense coronary disorder going with pole cell actuation from unfavorably susceptible, extreme touchiness, or anaphylactoid responses was first portrayed by Kounis and Zavras in 1991 and has been alluded to as "hypersensitive angina" or "hypersensitive myocardial localized necrosis". The system of Kounis condition (KS) includes arrival of provocative cytokines through pole cell enactment, which prompts coronary course vasospasm or potentially atheromatous plaque disintegration or crack. KS has been depicted with various conditions, including an assortment of ecological openings and medications.

Patient's Details and Presenting History: Patient is a 53year old female Gowri presented to our casualty with history of consumption of Fish around 12:50 Am at her residence following which she developed complaints of puffiness of face, Rashes all over body, breathlessness , chest pain and palpitations .Patient has no known other allergies , medical comorbidities and significant past history of any cardiovascular disease There was no significant history cardiac disease occurring at a early age in the family.

Examination: Patient was conscious, Oriented, Afebrile. No pallor/icterus/cyanosis/clubbing/lymphadenopathy Facial puffiness + Swollen lips + Swollen tongue BP110/70mm Hg PR– 82/ min Spo2- 94 @ room air RR– 31/ min Temperature -98.6 degrees CVS – S1 S2 heard, RS- normal vesicular breath sounds heard polyphonic biphasic wheeze heard all over the chest; P/A– bowel sounds + soft; CNS - No focal neurological defect.

Course in Hospital: Injection adrenaline 0.5 mg was given via intramuscular route (1:1000 dilution). Injection hydrocortisone was given intravenously (100 mg). Injection CPM 2cc was given intramuscularly, Nebulization was initiated. Fluids were started on flow (0.9% NaCl). Cardiac enzymes were within normal limits. Other routine investigations like CBC, RFT, LFT, Serum electrolytes, FLP and chest x ray were normal. There was no eosinophilia in peripheral blood ECHO at acute presentation was normal. Initially patient was diagnosed to have a acute allergic reaction to consumption of fish and was promptly managed. As the treatment was administered all of the symptoms like breathlessness, facial puffiness, swollen tongue and palpitations settled with time except for the chest pain which remained the same and worsened on mild exertion - ECG was obtained and it showed ST segment depression in lead I,II,III,aVL,aVF,V4-V6 . Immediately a diagnosis of acute coronary syndrome was made. Patient was put in continuous cardiac monitoring, propped up position and complete bed rest. Sublingual nitroglycerine 5 mg was given TDS. Intravenous fluids were given at 100 ml/hour. Injection hydrocortisone 50 mg intravenously TDS. Injection RANTAC 50 mg was given intravenously BD. Patient improved remarkably with the given treatment and chest pain slowly reduced and completely abolished after 5 days of initiation of treatment. Follow up ECG showed settling of ST segment changes. Follow up ECHO was normal. Patient is asymptomatic.

Keywords:

Case report, Anaphylactic reaction, Kounis syndrome, ST-T chnages in ECG, Myocardial infarction

Taming the Tiger: Ultra High Dose nitroglycerine in Sympathetic Crashing Acute Pulmonary Edema - A Case Series

Dr. Praveen Kumar
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. T V Ramakrishnan
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Abstract:

Patients with Rapid onset of severe dyspnoea (respiratory rate > 30/min), Hypoxemia (SpO2<90%), Hypertension (SBP >160 mmHg and/or MAP > 120 mmHg) and diffuse rales (sometimes with pink frothy sputum) falls under the diagnostic definition of Sympathetic Crashing Acute Pulmonary Edema (SCAPE). Conventional treatment includes Non-Invasive Ventilatory (CPAP/BiPAP) support and nitroglycerine (NTG) infusion (at doses of 5-50mcg/min). Many of these patients ends up receiving furosemide, conventional low dose NTG and eventually get intubated with prolonged ICU stay.

The current case series aims to present a set of 5 cases of SCAPE who presented to the emergency department (ED) of our tertiary care hospital and were successfully managed with high/ ultra-high doses of NTG. The dose in discussion includes starting infusions of >100mcg/min and cumulative bolus doses as high as 13mg in a chronic kidney disease patient who presented to emergency department with SCAPE (with maximum documented dose in literature being 9mg).

The discussion emphasises the importance of increased afterload causing acute decompensated heart failure in pathophysiology of SCAPE and how high dose NTG is helpful in quick symptomatic relief by afterload reduction (arterial dilatation at high doses), avoiding endotracheal intubation and shortens duration of hospital stay (with all cases being discharged within 12 hours of ED arrival).

Keywords:

Sympathetic Crashing Acute Pulmonary Edema (SCAPE), High Dose Nitroglycerine (NTG), Acute Decompensated Heart Failure, Chronic Kidney Disease (CKD), Emergency Department (ED)

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A Clinical Case Series on Different Presentations of Cardiac Sarcoidosis

Dr. Satwik
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. Preetam
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. B Vinod Kumar
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Abstract:

When a newly diagnosed nonischemic cardiomyopathy coexists with potentially fatal arrhythmias, it may be an indication inflammatory cardiomyopathy, such as cardiac sarcoidosis. Cardiac sarcoidosis results from epitheloid cell granulomas infiltrating the myocardium, predisposing patients to conduction disturbances, ventricular tachyarrhythmias and heart failure. It can present as the first or the only organ manifestation of sarcoidosis or on top of pre existing extra cardiac disease. While histopathology and myocardial biopsy are necessary for a definitive diagnosis, a combination of histology, clinical signs, and cardiac imaging can increase the likelihood of a successful diagnosis. Immunosuppression is the mainstay of treatment. For patients with advanced heart failure or ventricular arrhythmia, ventricular assist device therapy or heart transplantation may be considered.

Here, we discuss a case series of seven subjects presenting with arrhythmia or unexplained new onset cardiomyopathy. Clinical, imaging, pathological data were collected after retrospective analysis. Significant coronary artery disease was ruled out in all cases. On follow up, all subjects had improvement in both heart failure symptoms and arrhythmias.

Subjects were treated with immunosuppression, and those with fatal arrhythmias or LV dysfunction received ICD/ CRT- D respectively. Heart failure symptoms and arrhythmia incidence improved on follow-up.

Keywords:

Cardiac sarcoidosis, Heart failure, Arrhythmias, Ventricular tachyarrhythmias, Immunosuppression

Prevalence of Gastroesophageal Reflux Symptoms among Staff Nurses involved in Night Shifts in a Tertiary Care Hospital, Puducherry

Dr. Aravindan T
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Dr. Suresh K
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Abstract:

Background: Sleep deprivation may induce gastrointestinal disturbances and gastrointestinal symptoms may also lead to sleep derangements. Staff nurses in night shifts have high stress and burnouts.

Objectives: 1. To assess the prevalence of gastrointestinal Reflux symptoms among staff nurses involved in night shifts in a tertiary care centre in Puducherry. 2. To find association between reflux symptoms and sleep quality among the staff nurses in night shifts.

Material and Methods: The present study was cross sectional study carried out among staff nurses doing night shifts in a tertiary care centre in Puducherry for a period of 3 months. Participants with preexisting acid peptic disease, GI motility disorders, recent gastrointestinal surgeries, usage of analgesics at least once a month, pre-existing sleep disorders, pregnancy were excluded. The data was collected in a semi structured questionnaire. Statistical analysis was done using descriptive and analytical statistics.

Results: Around 60% of the participants were found to have poor sleep quality. Around 14% had 89% chance of having GERD and 25% had 79% chance of GERD based on their symptoms. The regard to the association between GERD and sleep quality, those with poor sleep quality were found to have increased chance of experiencing GERD symptoms and the probability of GERD was also higher in them than those with good quality sleep according to PSQI.

Conclusion: Both Gastroesophageal reflex disease and Sleep quality were found to be positively associated with each other.

Keywords:

Sleep Deprivation, Sleep Quality, Reflux Disease, Night Shift, Stress, Gastrointestinal Disease, Gastrointestinal Symptoms

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Correlation of Heart Rate Recovery Time and Coronary Angiogram Findings in South Indian Population

Dr. Arshad Ali
Saveetha Medlical College and Hospital, Chennai, India

Abstract:

Background: Coronary artery disease (CAD) is the leading cause of mortality and loss of Disability-Adjusted Life Years globally, with a significant burden on low- and middle-income countries. Accurate, non-invasive predictors of CAD severity are essential for early diagnosis and effective management. Heart rate recovery (HRR) is the difference between heart rate at peak exercise and precisely one minute into recovery. An abnormal HRR has been shown to have prognostic value in multiple patient populations. Still, its use in interpreting the TMT inconclusive cases for assessing the severity of CAD has yet to be well studied.

Aim: To evaluate the correlation between HRR time and CAD severity determined by coronary angiogram (CAG) in a South Indian population.

Methods and Results: The Bruce protocol determined HRR time in 75 patients aged 40 to 60 with chest pain syndromes and an inconclusive treadmill test (TMT). Patients also underwent routine lab tests and either invasive or CT coronary angiography. The mean age was 53.60±10.12 years. The majority were male (68.0%). Clinically, 36.0% had hypertension, 41.3% had diabetes, 12.0% had a family history of CAD, and 12.0% had dyslipidemia. Heart rate recovery was abnormal in 56% of patients. Coronary angiogram findings revealed that 33.3% had average results. In comparison, 34.7% had single vessel disease (SVD), 14.7% had double vessel disease (DVD), 5.3% had triple vessel disease (TVD), and 12% exhibited minor CAD/coronary slow flow. Among patients with normal HRR time, 57.7% had normal angiograms, 24.2% had SVD, 6% had DVD, 3.1% had TVD, and 9% had minor CAD/slow flow. In contrast, among patients with abnormal HRR time, 14.3% had normal angiograms, 42.9% had SVD, 21.4% had DVD, 7.1% had TVD, and 14.3% had minor CAD/slow flow. ROC curve analysis revealed an AUC of 0.422 for HRR predicting severe CAD, demonstrating its average predictive accuracy.

Conclusion: Abnormal HRR is a strong and independent predictor of severe CAD. Integrating HRR assessment into routine clinical practice could enhance the identification of high-risk patients, facilitate early intervention, and improve outcomes. Further studies are warranted to validate these findings in larger, multi-center cohorts and explore additional non-invasive markers for CAD.

Keywords:

Coronary Artery Disease, Heart Rate Recovery, Treadmill Testing, Coronary Angiogram, Non-Invasive Predictor, Cardiovascular Risk Stratification

Utility of Heart Rate Variability, Postural Hypotension and QTc Interval in Identifying Cardiac Autonomic Neuropathy in Diabetes Mellitus and Estimating Its Association with Peripheral Neuropathy

Dr. Pravarshini Datla
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. G Sowmya
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Abstract:

Background: Cardiac Autonomic Neuropathy (CAN) is a cardiovascular complication of diabetes which contributes to significant morbidity and mortality. Although several tests like Ewing's methodology are available to study CAN prevalence, they are cumbersome. QTc interval is a simple yet effective predictor of CAN in diabetics.

Aim: To assess the importance of QTc interval, Postural hypotension and lack of Heart rate variability as a non-invasive method to predict CAN and its association with peripheral neuropathy.

Methodology: Adult diabetics admitted with QTc>440ms were included in the study. Age, gender, duration of DM and HbA1c were noted. QTc was calculated using Bazett's formula. Peripheral neuropathy was assessed clinically. Postural/Orthostatic hypotension was measured. Heart rate variability with respiration was calculated using ECG.

Results: A total of 75 diabetics were included in the study. Mean age was 55.87±10.95years. Women were 58.7%. There was significant negative correlation between age and HRV ($r=-0.55$; $p<0.05$). QTc and HRV didn't show any statistically significant difference with gender. HRV and duration of DM had negative correlation ($r=-0.40$; $p<0.05$). HbA1c had no statistically significant correlation with QTc or HRV. There was significant inverse correlation between QTc and HRV ($r=-0.49$; p value<0.05). Mean QTc was 460.45±21.623ms. QTc did not show statistically significant correlation with age. Postural hypotension was found in 29.3%patients, of which 81.9%had moderate to severe decrease in HRV. Among 42 patients with peripheral neuropathy, 31 patients (73.8%) had significant decrease in HRV.

Conclusion: Prevalence of CAN increases with age while gender and glycemic control have no affect. Severity of CAN increases with duration of DM. Postural hypotension and peripheral neuropathy are associated with moderate to severe CAN. QTc prolongation proved to be an effective predictor of CAN. QTc prolongation, heart rate variability with respiration and postural hypotension are easy, non-invasive measures to predict and classify CAN, hence should be used periodically for screening.

Keywords:

Cardiac Autonomic Neuropathy, Heart Rate Variability, QTc, Postural Hypotension, Peripheral Neuropathy

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A Rare Presentation of Primary Hyperparathyroidism with Extensive Skeletal and Renal Manifestations in a Young Female

Dr. Veerabadren
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. Ramakrishnan
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Abstract:

Introduction: Primary hyperparathyroidism presenting with Brown's tumour and staghorn calculi is rare, especially in young females. We describe a case highlighting the complex clinical presentation and management challenges of this condition.

Case Report: 26-year-old female, no previously known comorbidities, came with abdominal pain, nausea, vomiting, fever with chills and rigors. history of renal calculus at 17 years of age suggesting the onset of disease at a much younger age. baseline labs showed normocytic normochromic anaemia, elevated total counts. RFT, electrolytes within normal limits, LFT showed albumin of 2.7, ALP of 464, CT KUB showed right staghorn calculus, left ureteric calculus with moderate HUN, bilateral renal calculi, left subcapsular collection causing compression of the left kidney, visualised bones showing diffuse mild sclerosis and multiple expansile lytic lesions in vertebral bodies, pelvis, both femur and ribs - suggestive of browns tumour. On hand radiographs lytic lesion noted in the proximal phalanx of the left middle finger. USG screening showed left perinephric solidified collection of around 150 mL. Urine culture grew streptococcus sp. treated with appropriate antibiotics. Serum corrected calcium 13.1, serum phosphorus 2.5, intact PTH 2139, TSH 1.65. Patient was given IV hydration @ 125 mL.hr and inj. Calcitonin. Patient was later taken up for left DJ stenting, followed by left PCD insertion and around 230 ml of pus drained which grew CONS and streptococcus sp.. PCNL of right staghorn calculus and left URSL was also performed subsequently. In view of PTH dependant hypercalcemia, USG neck and Tc99m Sestamibi scan showed abnormal tracer uptake in lower pole of right thyroid lobe. Patient was taken up for right inferior parathyroidectomy. Preoperative PTH was 1533 and postoperative PTH after 10 minutes of excision was 137. HPE suggestive of parathyroid adenoma. Patient became symptomatically better with discharge labs showing calcium 8.9, phosphorus 1.4, magnesium 1.8. Patient is currently on regular follow up and is doing well.

Conclusion: Early recognition and comprehensive management of primary hyperparathyroidism are crucial in preventing severe complications such as Brown's tumour and staghorn calculi. This case underscores the importance of timely surgical intervention and multidisciplinary care in achieving favourable patient outcomes.

Keywords:

Primary Hyperparathyroidism, Brown's Tumour, Staghorn Calculus, Parathyroidectomy, Subcapsular Abscess

Earlier the Better - Supravalvular Aortic Stenosis in Familial Hypercholesterolemia

Dr. Surendran
SRM Medical College Hospital and Research Centre, Kattankulathur, Chennai, India

Abstract:

Introduction: Familial Hypercholesterolemia is an autosomal dominant disorder caused by various mutation in low density lipoprotein receptor gene. This can lead to premature coronary atherosclerosis and cardiac related death. Premature malignant atherogenesis leading to aortic root abnormalities causing supravalvular aortic stenosis is rare. Our case demonstrates phenotypic presentation of familial hypercholesterolemia xanthomatous patient presenting with supravalvular aortic stenosis with diagnostic imaging findings.

Case Description: A 24-year-old male presented with complaints of shortness of breath (NYHA class III) which was progressive, associated with orthopnea with the history of multiple swellings over the hands. He was a non-smoker. There is a significant family history of sudden cardiac death of his father at the age of 40 who had tendon xanthoma. On examination smooth nodules were present over tendons of hands which was non tender. Blood pressure was 140/80mmHG in right hand and 130/80mmHG in left hand. On systemic examination CVS – s1 s2 present, ejection systolic murmur present over aortic area. Respiratory and Central nervous system examination was normal. Investigation showed serum cholesterol – 448mg/dl, LDL – 409mg/dl, Triglycerides – 128mg/dl, HDl – 56mg/dl. ECG shows left ventricular hypertrophy. Echo shows aortic valve thickened and calcified with severe aortic stenosis. Skin biopsy showed features consistent with eruptive xanthomas. CT aortogram showed aortic vale calcification and supravalvular aortic stenosis and atheromatous calcific changes involving aortic root, ascending aorta, aortic arch, abdominal aorta, bilateral subclavian and axillary arteries.

According to simon broome's criteria diagnosis of familial hypercholesterolemia type IIb was made (total cholesterol > 7.5mmol/lit, LDL >4.9mmol/lit, plus tendon xanthoma present in his father – category A. William syndrome could be ruled out since our patient doesn't have dysmorphic appearance and had good mental development. Patient was found to be heterozygous. Patient was advised low fat diet, physical exercise and was treated with high intensity statins, Ezetimibe and lipid levels were improved. Screening of the family members was also done.

Conclusion: Early diagnosis and aggressive treatment along with life style changes prevents premature coronary heart disease and atherosclerotic sequalae in patients with familial hypercholesterolemia. Cascading family foremost important.

Keywords:

Supravalvular Aortic Stenosis, Familial Hypercholesterolemia, Autosomal Dominant Disorder

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Interesting Case of SLE with PRES

Dr. Shrinidhi B
Saveetha Medlical College and Hospital, Chennai, India

Abstract:

Introduction: Posterior Reversible Encephalopathy Syndrome (PRES) represents a complex neurological disorder characterized by subcortical vasogenic edema predominantly affecting the posterior regions of the brain. While traditionally associated with hypertension and various immunosuppressive therapies, its occurrence in the setting of Systemic Lupus Erythematosus (SLE) has increasingly drawn attention due to its diverse clinical manifestations and potential reversibility with early recognition and management. This review aims to explore the pathophysiology, clinical features, diagnostic challenges, and optimal treatment strategies of PRES specifically in patients with SLE, highlighting the importance of prompt identification and tailored therapeutic interventions to mitigate potential neurological manifestation.

Case Details: Patient is a recently diagnosed SLE completed 3 doses of pulse steroid therapy in an outside hospital now came to our hospital with complaints of severe knee pain (right>left). All routine investigations were done - Hb- 8.1, plt 55 k, TLC - 5980. Na- 130, Alb - 2. RFT & serum electrolytes were normal. PS showed Microcytic hypochromic to Normocytic normochromic Anemia, Thrombocytopenia. C3, C4 was sent & was low. USG Knee was done which showed mild effusion in the joint space. Patient was initially started on intravenous dexa, IV antibiotics & continued on previously used immuno-modulators. MRI Knee was deferred as the pain settled after steroid injection. DCT was found to be positive. Blood cultures showed no growth. Fever profile came out negative. urine PCR -0.8, 24 hrs urine protein was 249.2 mg/day. Retic count was 0.3%. LDH was 372. MAS workup was done, which showed TGL-224, fibrinogen -269, OT, PT- normal, serum ferritin -551, s/o ? probable MAS. ECHO was done & was found to be normal. 3 days after admission patient developed severe headache. In view of high disease activity and probable MAS, patient was started on pulse steroid therapy (inj.methylpred 500mg iv od - 5 days). Headache was persistent & then patient developed GTCS & accelerated hypertension. Patient was then shifted to ICU & was started on anti-epileptics & brain imaging was done. Brain imaging was suggestive of Multiple, bilateral symmetrical, ill-defined hypodensities seen involving the sub-cortical and deep white matter of bilateral high frontal and high parietal region. Patient had 4 episodes of GTCS & was intubated & started on iv sedation. CSF analysis was done & infection was ruled out. Patient developed weakness of left upper & lower limb (Power - 0/5). Rpt brain imaging was suggestive of PRES in the same area with internal hemorrhagic foci. Neurology opinion was obtained and started on dual anti-epileptics, anti hypertensives (telmisartan 40mg bd & cilacar 10mg bd) & anti-edema measures. EEG RECORD SHOWS NONSPECIFIC ELECTROPHYSIOLOGICAL CEREBRAL DYSFUNCTION INVOLVING BOTH HEMISPHERES. Repeat routines showed pancytopenia. Blood products were transfused. Once patient had seizure free period of more than 24 hrs, patient was extubated. After taking rheumatologist opinion patient was given IVIG 1 g/kg BW over 3 divided doses over 3 days (15g+15g+10g). In view of agitation, psychiatry opinion was obtained and was adviced for supportive psychotherapy. Serial monitoring of vitals & CBC was done. CBC-6.6/3960/16000 (12/7/24), 6/3630/39000 (15/7/24), 6.7/3620/54000 (17/7/24). Patient improved symptomatically & was shifted to ward once all the blood parameters started improving. Patient was planned for cyclophosphamide. After ruling out all underlying infectious pathology patient was started on Inj Cyclophosphamide 700 mg was given (as per protocol) along with Mesna on 16/7/24. Continuous vitals monitoring was done. Patient had continuous tachycardia (~120bpm) secondary to T.Nicardia 20mg bd which was changed in ICU. in view of tachycardia, nicardia was stopped and switched to T. telmisartan 40mg bd & cilacar 10mg bd. Patient developed temperature spikes post cyclophosphamide & was agitated throughout her hospital stay. In view of persistent agitation, emergency psychiatric opinion was obtained and was advised for stat dose of quetiapine 25mg (17/7/24). Half an hour after the dosage patient developed sudden tachycardia, hypotension & was shifted back to ICU on 17/7/24 night. Patient was given supportive oxygen therapy & started on noradrenaline support & tapered according to BP. antihypertensives were stopped. Patient condition improved & was shifted to ward on 19/7/24. No further fever episodes. CBC -4.5/ 2170/34000 (19/7/24), CRP- 177, procalcitonin- 40.6, repeat blood and urine c/s - reorts awaited. Patient was treated with Inj.Dexa 8mg iv od, Inj.piptaz 4.5gm iv tds along with other supportive medications.

Conclusion: In conclusion, Posterior Reversible Encephalopathy Syndrome (PRES) presents a significant clinical challenge in patients with Systemic Lupus Erythematosus (SLE), characterized by its diverse neurological manifestations and potential for

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reversibility with appropriate management. The pathophysiology involves a complex interplay of endothelial dysfunction, cerebral autoregulatory failure, and blood-brain barrier disruption, exacerbated by underlying autoimmune inflammation and associated comorbidities such as hypertension and immunosuppressive therapies

Clinical recognition remains paramount, given the variable presentation ranging from headaches and visual disturbances to seizures and altered mental status. Despite advancements in diagnostic imaging modalities like MRI, challenges persist in distinguishing PRES from other neurological complications of SLE. Therefore, a high index of suspicion coupled with prompt neuroimaging and laboratory evaluation is essential for timely diagnosis and initiation of targeted therapies, including blood pressure control, withdrawal or modification of immunosuppressants, and supportive care.

Keywords:

Posterior Reversible Encephalopathy Syndrome, Complex Neurological Disorder, Systemic Lupus Erythematosus (SLE)

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Unmasking the Silent Culprit: Spontaneous Vertebral Artery Dissection as a Hidden Instigator of Stroke – A Compelling Case Report

Dr. Sanjana JP
Sree Balaji Medical College and Hospital, Chennai, India

Abstract:

Spontaneous vertebral artery dissection (VAD) is a rare but significant cause of ischemic stroke in young adults, often following minor trauma. A 37-year-old female presented with sudden, severe occipital headache and giddiness, impairing balance and mobility. Initial imaging, including CT and MRI, revealed an acute infarct in the left cerebellar hemisphere, suspected to involve the PICA territory. Despite normal hematological and autoimmune panels, further investigation with CT angiography and DSA identified a small dissection in the left vertebral artery. The patient was treated conservatively with neuroprotective agents, dual antiplatelets, and Rivaroxaban. She was discharged on a regular follow-up schedule. This case highlights the rarity of spontaneous VAD causing ischemic stroke without preceding trauma, emphasizing the need for comprehensive diagnostic evaluation in similar clinical presentations.

Keywords:

Spontaneous Vertebral Artery Dissection, Ischemic Stroke, Posterior Inferior Cerebellar Artery, Digital Subtraction Angiography

A Malignant Complication of a Vitamin Deficiency -A Rare Case Report

Dr. B Vivek Arvind
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. I. Rohini M. D
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. Chandrasekar
Govt. Stanley Medical College and Hospital, Chennai, India

Abstract:

Introduction: Pulmonary embolism is an uncommon manifestation of vitamin b12 deficinecy. The deficiency has led to impaired breakdown of homocysteine and inducing a state of secondary homocysteinemia which has lead to thrombus formation.

Case Discussion: A 35 year old male was received in emergency with complaints of sudden onset dyspnea for 4 hours. On examination, patient was conscious, oriented and tachypnic and systemic examination was normal. ECG showed sinus tachycardia. D dimer was found be 1582 ng/dl. CTPA was done which showed the presence of multiple subsegmental thrombus and the patient was heparinised. The patient was evaluated for hypercoaguable state and homocysteine was found to be 50umol/L. The peripheral smear showed the presence of hypersegemented neutrophils and vitamin B12 level was found to be 140pg/ml. The patient was started on vitamin B12 supplements. The patient was serially followed up over 3 months and the homocycteine values normalised.

Conclusion: Homocysteine damages the vessel wall and induces thrombophilic state and the deficiency of vitaminB12 in the above scenario triggered secondary homocysteinemia leading to pulmonary embolism and levels normalised with vitamin supplementation.

Keywords:

Malignant Complication, Vitamin Deficiency, Pulmonary Embolism, Vitamin B12 Deficiency

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Masquerader's Kardia Alibi - An Incidental Cardiac Finding in Stroke Patients

Dr. Dhanush Balaji
Saveetha Medlical College and Hospital, Chennai, India

Dr. Selva Balaji R
Saveetha Medlical College and Hospital, Chennai, India

Dr. Abinaya Srinivasa Rangan
Saveetha Medlical College and Hospital, Chennai, India

Dr. S. Prasanna Karthik
Saveetha Medlical College and Hospital, Chennai, India

Dr. Sathish Kumar M
Saveetha Medlical College and Hospital, Chennai, India

Abstract:

Introduction: The cause of coarctation of the aorta is congenital constriction of the thoracic aorta, often identified early in infancy and infrequently manifests as hypertension in adults. The diagnosis often gets missed without proper clinical evaluation. Blood pressure should be mandatorily checked in all 4 limbs in all patients presenting with hypertension in order to avoid missing the diagnosis. Coarctation of the Aorta often forms an iceberg in a clinical setting of hypertension and should be diagnosed appropriately early in life, especially in patients presenting with young-age hypertension and early surgical interventions should be done to avoid complications. In this report, we present a case of a 55-year-old male who experienced a hemorrhagic stroke due to a condition called coarctation of the aorta, which was discovered by chance.

Case Report: A 55 years old male, a farmer by profession, chronic smoker and alcoholic, a recently diagnosed hypertensive for 3 months came with complaints of left-sided upper and lower limb weakness x 1 day associated with deviation of angle of the mouth towards the right side. The patient is a recently diagnosed case of systemic hypertension, got diagnosed 3 months ago after was started on calcium channel blockers, patient was on irregular medications. No history of similar episodes in the past. On examination, his GCS was E2V1M2. Bilateral pupils were equally reactive. On arrival, his pulse rate was 82 beats/ minute, blood pressure was 220/110 mmHg on arrival, measured in his right arm in the supine position. The patient had an extensor plantar reflex on the right side. Neck rigidity and meningeal signs were absent. The patient's CBC, RFT, LFT, serum electrolytes, and coagulation profile were found to be normal.

CT brain showed hemorrhage (4.3x1.7x3.2 cms) in the right gangliocapsular region with no midline shift. Neurosurgery advised to repeat CT brain after 12 hours. The patient was intubated to due his low GCS and was shifted to INTENSIVE CARE UNIT and was given antiedema measures, calcium channel blockers, adrenergic antagonists, antiepileptics, PPIs, antiemetics, and sedatives. Repeat CT brain after 12 hours showed an increase in the size of hemorrhage (4.6x1.7x3 cms) in the right gangliocapsular region with a midline shift of approximately 3 cms. The patient was started on INJ LABETOLOL infusion at 4ml/hour following his persistently raised blood pressure. 2D ECHO was done on admission which was a normal study and Cardiology advised to control blood pressure.

Blood Pressure was closely monitored and was found to be refractory. It later found that Upper limb BP was more elevated than Lower limb BP with a difference >20 mmHg and femoral pulses were feeble. An inferior border rib notch was visible on the chest X-ray. CT thorax showed preductal coarctation of the Aorta with aneurysmal dilatation of distal descending thoracic aorta (approx. 5.3 cms) and left subclavian artery (approx. 1.9 cms), Cardiomegaly, B/L patchy consolidatory changes with surrounding ground glass opacity.

Cardiothoracic and Vascular Surgery are advised for surgical intervention after stabilization of the general condition. Initially, the patient was extubated as his general condition stabilized but was re-intubated due to a sudden drop in his GCS and desaturation. The patient's condition was explained to bystanders and the need for tracheostomy due to prolonged intubation for which bystanders were not willing. During the ICU STAY, the patient was given anti-edema measures, anti-epileptics, statins, antibiotics, nebulizers, PPIs, laxatives, and steroids.

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On Day 20, the patient had sudden desaturation, bradycardia SpO2- 68% on mechanical ventilation, ET secretions were suctioned and CPR was initiated as per ACLS protocol. The patient had cardiorespiratory arrest and was declared dead.

Discussion: CoA (Coarctation of the aorta) is a constriction of the descending aorta which is present below/near ductus arteriosus, a common congenital defect that occurs as either as an isolated CoA or else with a variety of other lesions, like bicuspid aortic valve/ VSD. It is common for the diagnosis to be delayed until the patient has hypertension or congestive heart failure, which is common in newborns. CoA in young adults usually is an incidental finding and presents as uncontrolled hypertension and clinical diagnosis is by checking all 4 limbs and ruling out other causes of secondary hypertension before coming to a conclusion of CoA.

This case report details the usual presentation of a hypertensive patient with intracerebral haemorrhage. This patient was recently diagnosed with systemic hypertension and was

started on antihypertensives. During the stay in the hospital, the patient was found to have refractory hypertension and was further evaluated and diagnosed with Coarctation of the aorta on further clinical and radiological evaluation. Uncontrolled hypertension in elderly patients developing stroke is common although the diagnosis of CoA as the secondary cause of systemic hypertension is rare and blood pressure management in the patients alone is not sufficient and requires surgical intervention. Aortic indentation, cardiomegaly, and early rib notching on imaging were among the late-onset symptoms that this patient displayed.

Individuals who have had surgical correction for coarctation of the aorta (CoA) experience worse long-term survival rates when compared to the general population. Typically, they manifest as nosebleeds, headaches, or, in rare cases, the rupture of a brain aneurysm. Untreated patients have a significantly elevated mortality rate. The surgical treatment for aortic constriction involves procedures such as end-to-end anastomosis, aortic excision with graft replacement, or prosthetic patch autoplasty.

Coarctation of the aorta leads to hypertension both due to physical narrowing and worsening arterial compliance via remodeling which in case if it is not diagnosed early leads to other manifestations like stroke. There is an increase in turbulence of blood flow during systole to the upper extremities and an increase in cerebral perfusion leading to blood vessels becoming fragile and the development of aneurysms which later rupture and presents as bleeding manifestations like epistaxis, and hemorrhagic stroke.

Conclusion: The secondary causes of hypertension like coarctation of the aorta should always be ruled out when a patient presents with systemic hypertension. Prompt clinical diagnosis is mandatory before initiation of antihypertensives. Coarctation of the aorta always requires early surgical intervention to increase life expectancy in patients.

Keywords:

Masquerader, Kardia Alibi, Cardiac Finding, Stroke Patients

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A Study of Comparison of Micro Albuminuria between Pre Hypertensive and Normotensive Individuals in a Tertiary Care Hospital in a Sub Urban Population

Dr. Manam Mani Srikanth
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. K. Srinivasagalu
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

Background: Prehypertension is a blood pressure reading where the patient's BP is more than normal but not up to the level which is considered as hypertension. Prehypertension is a warning sign that the patient may develop hypertension in his near future. The aim of the study is to look for the presence of microalbuminuria in two groups namely a pre hypertensive group (BP 120- 139/80-89mmHg) and a normotensive group (BP <120/80 mmHg) and to find out is there a significant difference in presence of microalbuminuria in both groups. This study shows the importance of screening and identification of pre hypertensive individuals

Aims: A study of comparison of micro albuminuria between pre hypertensive and normotensive individuals in a tertiary care hospital in a sub urban population.

Materials and Methods: The study participants were selected from ward patient's attenders (100 sample) who were divided into two groups based on their blood pressure measurement. A brief history was recorded. Urine albumin creatinine ratio for microalbuminuria, and echocardiogram to detect diastolic dysfunction were done in all participants. Other relevant investigations were done, SPSS was used for statistical analysis of results.

Results:

1. The distribution of microalbuminuria in two groups are 2% and 28% in normotensive and prehypertensive group respectively ('p' values <0.001) which is statistically significant
2. The distribution of diastolic dysfunction is 32% in prehypertensive group while none had diastolic dysfunction in normotensive group ('p' value is 0.004) which is statistically significant. 60% of those participants with microalbuminuria had associated diastolic dysfunction also.

Conclusion: The study highlights the importance of End organ damage which starts to occur even at a prehypertension stage of blood pressure. So, screening for high BP should start early and if detected to be prehypertensive, life style modification should be strongly recommended.

Keywords:

Micro Albuminuria, Tertiary Care Hospital, Sub Urban Population

HIV-Associated Neurocognitive Disorder in A Patient with CSF Viral Escape: A Case Report

Dr. Tirumani Raghu Ram Prasad
Saveetha Medlical College and Hospital, Chennai, India

Abstract:

Background: Despite the widespread use of combination antiretroviral therapy (cART), HIV-associated neurocognitive disorder (HAND) are not showing a significant reduction in their occurrence. Changes in memory, concentration, attention, and motor skills are common in patients with HIV. When these occur without an evident cause other than HIV infection, such impairments have been collectively classified as HIV-Associated Neurocognitive Disorders (HAND). However, the existence of a less severe form of the HAND in a patient with less serum viral load is reported in post cART era.

Case Presentation: We report a 42-year-old male, found to have HIV infection on routine testing post-RTA in 2014. On ART (Tenofovir-emtricitabine+Atazanavir-ritonavir) since then. His current CD4 lymphocyte count is 352 cells/uL with a viral RNA level of < 66.9 copies/mL. Currently presented with slowness of activity, memory loss, and generalised weakness. On examination Attention and calculation were impaired, and word output decreased. Lower limb power is 4/5. Brain MRI revealed diffuse B/L frontal, temporal, parietal periventricular white matter T2 and FLAIR hyperintensities. PML was ruled out as JC virus PCR was negative. Then CSF viral load was sent which showed 2365 copies/ml. CNS viral escape has been considered. Zidovudine+lamivudine+Dolutegravir regimen was started. On 6 months follow-up evaluation, he is clinically stable with significant improvement of his symptoms and attending his job regularly.

Conclusion: This case supports the current understanding regarding the persistent occurrence of HIV-associated neurocognitive disorder even decades after the introduction of cART. Therefore, it's important to screen HIV+ patients for the HAND even if they have relatively preserved immunity. Because the patient can be easily shifted to ART drugs with better CNS penetrating potential to achieve an acceptable virological suppression level, to observe sound clinical improvement.

Keywords:

HIV, cART, Viral Escape, HAND

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A Refractory Case of Refractory Hypertension

Dr. M. Ajith
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. G. Vijayalakshmi
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. B. Umamaheswari
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. I. Rohini
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. S. Chandrasekar
Govt. Stanley Medical College and Hospital, Chennai, India

Abstract:

Case Report: A 38 year old female, k/c/o DM/SHTN/CAD HFref-30%, CKD-DKD, hypothyroidism, diabetic retinopathy/ neuropathy came with c/o b/l leg swelling for 4 months and breathlessness for two weeks. O/e pt awake, obeying oral commands, tachypnoea+, pallor+, b/l UL edema till shoulder joint, lower limb edema till hip joint, abdominal wall edema+. BP-210/120.S/e, RS: b/l air entry reduced on both sides

Since admission, pt had a BP of more than 210/120, and had been tailored to the following antihypertensives: Nifedipine 90mg, Prazosin15mg, Inj Lasix 180mg, Enalapril 20mg, Metolazone 10mg, Clonidine 0.2mg, Amiloride 10mg, Hydrochlorthalidone 25mg, Labetolol 5mg/min and NTG infusion 150mics/min on alternate days – inspite of which BP could not be controlled. Meanwhile, other investigations showed urea- 45, Cr-2.3, Urine PCR- 18, USG abdomen – b/l grade 1 MRD, Massive ascites, Abdominal wall edema+. CXR- B/L Pleural effusion +.24 hr urine metanephrines negative, Renal artery Doppler- normal study.CT abdomen – Normal study.

In view of refractory hypertension, pt was started on Peritoneal dialysis 40 cycles. After achieving hemodynamic stability, pt was switched over to hemodialysis in isoosmolar- ultrafiltration mode (3 cycles)- following which Pt's BP had fallen and so did the dosage of antihypertensives. The pt started maintaining on antihypertensives- Nifedipine 30mgmg, Prazosin 10mg. Metoprolol 50mg, Metolazone 10mg, ARNI 100mg following the resolve of volume overload state.

Discussion: It is important to understand the pathophysiology of hypertension rather than adding additional hypertensive drug.In this case,

- As kidney function starts detoriating, the natriuretic capacity of the kidney declines, salt sensitivity increases which increases volume overload and hypertension.
- According to neurohormonal model of heart failure, sympathetic nervous system overactivity is predominantly observed which further activates RAAS system, further contributing to volume overload and hypertension.
- As this is a case of salt sensitive hypertension, adding antihypertensives which did not address the pathophysiology did not reduce the BP significantly. However, after the pt was started on dialysis, the volume overload component had been addressed following which the BP had returned to near normal levels.

Conclusion: It is critical to properly phenotype these patients and identify evidence-based effective treatment for them since they are at greatly increased risk of target organ damage. Applying a precision medicine approach by addressing the underlying pathophysiology that is responsible for resistance to medical and device-based BP treatment would improve BP control and outcomes in these patients.

Keywords:

Refractory Hypertension, Peritoneal Dialysis

A Rare Case of Atrial Functional Tricuspid Regurgitation Associated with Pulmonary Artery Hypertension

Dr. Siva Krishna
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Dr. K Nagarajan
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Dr. Lanord Stanley Jawahar
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Abstract:

A rare case of atrial functional tricuspid regurgitation associated with pulmonary artery hypertension A 80 year old male came to our outpatient department with history of fatigue, loss of appetite, weight loss, breathlessness (grade 3 nyha) and irregular palpitations since 1 month. Patient is a known alcoholic and smoker with no other co-morbidities. On examination patient was found to have irregularly irregular pulse and blowing holosystolic murmur heard in the tricuspid area along with loud p2 in pulmonary area. ECG was suggestive of atrial fibrillation and echo was suggestive of severe tr with severe pulmonary artery hypertension. Chest x ray revealed no features of COPD. Hence patient was diagnosed to have atrial functional tricuspid regurgitation associated with pulmonary artery hypertension which is a rare entity.

Keywords:

Elderly Male, Atrial Fibrillation , Pulmonary Artery Hypertension , Atrial' Functional Tricuspid Regurgitation

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Magnitude of Pulmonary Hypertension in CKD Patients in Tertiary Care Hospital

Dr. R. Arivoli
Cuddalore Govt Medical College, Chidambaram, India

Dr. Saritha K Narayanan
Cuddalore Govt Medical College, Chidambaram, India

Dr. R. Siddharth
Cuddalore Govt Medical College, Chidambaram, India

Abstract:

Introduction: Pulmonary Hypertension (PH) is a common co-morbidity in patients with Chronic Kidney Disease (CKD) and end-stage renal disease.

Objectives: To study the magnitude of pulmonary hypertension in CKD patients

Materials and Methods: 100 Patients with a diagnosis of chronic kidney disease where taken up for the study and 2D ECHO done to obtain estimated Pulmonary artery pressure.

Results: A pre-designed proforma was used for patients. Their Systolic PAP is assessed by 2D Echocardiography and diagnosed as PHT when systolic PAP >35 mmHg. 24% of CKD patients developed Pulmonary hypertension.

Conclusion: Early diagnosis of Pulmonary hypertension in CKD patients is essential to initiate medications early to reduce morbidity and mortality. Possible mechanisms that have been suggested include endothelial dysfunction due to increased oxidative stress from uremic toxins, chronic inflammation resulting from exposure of the blood to dialysis membrane, vascular calcification, and increased flow from arteriovenous fistula.

Keywords:

Elderly Male, Atrial Fibrillation , Pulmonary Artery Hypertension , Atrial' Functional Tricuspid Regurgitation

Serum Magnesium Level with SOFA Score in Predicting the Prognosis among Acute Coronary Syndrome patients and Its Associated Complications in Tertiary Care Centre

Dr. Vidhya B
Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India

Abstract:

Introduction: Magnesium is an essential element in functioning human body. Low magnesium is associated with membrane destabilization, whereas high concentrations are membrane stabilizing and therefore, antiarrhythmic. Acute coronary syndrome comprises of ST segment elevated myocardial infarction (STEMI), non-ST segment elevated myocardial infarction (NSTEMI) and unstable angina where the blood flow to the heart is decreased.

Aim & Objectives: To find the prevalence of Serum Magnesium levels with SOFA score in assessing the prognosis in Acute Coronary Syndrome patients and its associated complications.

Methodology: This is hospital-based cross-sectional study. The sample size was calculated to be 77. All patients of age more than 18 years who are diagnosed to have Acute Coronary Syndromes were included in this study after screening for the exclusion criteria. After written consent, all patients were subjected into study. Clinical presentation and demographic profile and lab parameters were assessed.

Results: In this study of 77 patients the mean age was 60 ± 10.8; age group between 51-70 had highest proportion of 57%. About 71.40% are male, while 29% are female. Chest pain observed in 100% of patients while palpitation seen in 98.7%. Highest proportion of comorbidity seen in Type 2 Diabetes 90%, followed by Systemic Hypertension at 64%. The majority of patients across most variables fall into the Normomagnesemia category. The differences in distribution of age, gender, comorbidities, Troponin I status, and ECG changes & SOFA score across the magnesium levels categories are not statistically significant, as indicated by the P values being greater than 0.05. These patients did not develop any arrhythmic complications.

Conclusion: This study showed no significant relationship between the Serum Magnesium and SOFA score and good prognosis among patients with acute coronary syndrome. However, further studies are required to increase the understanding of the association between Serum Magnesium and SOFA score in various study settings to diagnose the patient earlier and take necessary preventive measures and treatment to prevent the occurrence of complications.

Keywords:

Acute Coronary Syndrome, Serum Magnesium, SOFA Score, Normomagnesemia

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Study of Lipid Indices in Acute Ischemic Stroke-A Retrospective Analysis

Dr. Yohidha Balamurugan
Saveetha Medlical College and Hospital, Chennai, India

Dr. Ananthakumar P. K
Saveetha Medlical College and Hospital, Chennai, India

Dr. Uthamchand
Saveetha Medlical College and Hospital, Chennai, India

Dr. Sriharsha
Saveetha Medlical College and Hospital, Chennai, India

Abstract:

Stroke is one of the leading cause of disability and mortality worldwide, poses significant challenges to healthcare systems and societies. The interplay between lipids and stroke is multi-faceted.

Lipid indices like Atherogrnic Index of Plasma (AIP), Castelli's Risk Index (CRI-1) and Castelli's Risk Index-2(CRI-2) serve as important biomarkers reflecting lipid metabolism and could serve as predictors of stroke outcome.

This study aims to investigate the association between lipid indices and Acute ischemic stroke, elucidating their potential as biomarker for targeted treatment and to predict disease outcome.

This study was conducted using medical records from Saveetha Hospitals, spanning from January 2023 to June 2023.

The study group consisted of patients diagnosed with Acute Ischemic Stroke (AIS) from January 2023 to June 2023. The control group consisted of healthy volunteers. The following data were collected: Age, gender, co-morbidities, lipid profile parameters. Lipid indices were calculated using the formula: AIP=log (serum Triglyceride/serum HDL), CRI-1= Serum cholesterol/serum HDL, CRI-2= Serum LDL/Serum HDL. Using SPSS software, paired t test was employed to compare between cases and control groups. P-value of <0.005 was considered statistically significant.

Lipid indices helps in assessing the risk of stroke. Understanding the interplay between lipid profile and stroke outcome is essential for optimising preventive and therapeutic strategies in clinical practice. These lipid indices can be easily estimated from routine blood panel, and could be considered as cheaper alternative compared to other diagnostic modalities. In conclusion, this study provides valuable insights into the association between lipid indices and stroke. This study provides insights into development of targeted treatment strategies aimed at reducing atherosclerosis, cardiovascular risk factor and also to improve long term outcomes in stroke patients.

Keywords:

Ischemic stroke, Atherogenic index of plasma, Castelli's Risk Index-1, Castelli's Risk Index-2

Healthcare-associated Infection in Intensive Care Units: Overall Analysis of Patient Criticality by Acute Physiology and Chronic Health Evaluation IV Scoring and Pathogenic Characteristics

Dr. Santhosh
Sri Muthukumaran Medical College Hospital and Research Institute, Chennai, India

Abstract:

Objectives: To compare the predicted vs observed mortality rate, criticality, and length of stay of the patients with healthcare-associated infections (HAIs) in intensive care units (ICUs) of a tertiary health centre through acute physiology and chronic health evaluation (APACHE) IV scoring. To analyse the drug sensitivity pattern of the isolated pathogen.

Design: This is a prospective observational study involving the patients admitted to various ICUs of a tertiary care teaching hospital. Among 1,229 patients who were admitted in the ICUs for a period of 2.5 months (74 days), 767 patients stayed beyond 48 hours. They were monitored and 87 of them who developed HAIs were included in the study. The organisms isolated from the infection site were identified, and the drug resistance pattern was reported as per standard guidelines. The patients were followed up till their discharge, and adequate details pertaining to the study were collected including demographic details and physiological and biochemical parameters to calculate APACHE IV score, length of stay, and prognosis.

Setting: Intensive care units of JSS Hospital, Mysuru, Karnataka, India.

Subjects/patients: All patients who developed HAI in ICUs.

Interventions: Nil.

Measurements and Main results: The HAI rate observed in this study was 15.7%. Ventilator-associated pneumonia (VAP) was the most common type of infection. *Klebsiella* and *Acinetobacter* were the frequently isolated organisms. There was a high prevalence of drug resistance among these pathogens. The ICU mortality in infected patients was 21.83%, roughly twice as that of uninfected patients. The observed length of stay was 11.66 (±8.53) days.

Conclusion: Healthcare-associated infection was associated with long duration of ICU stay. There was a high prevalence of drug resistance to various antibiotics. Acute physiology and chronic health evaluation IV score was not found to be good scoring system to predict the mortality and length of stay in the patients who had HAI.

Keywords:

Adult Congenital Heart Disease, Asymptomatic Ventricular Septal Defect

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The Diagnostic Value of Lead aVR in ECGn

Dr. R. V. Thiagarajan
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

Introduction:

- Lead aVR one of the 12 electrocardiographic leads is frequently ignored in clinical medicine.
- The augmented limb leads were developed to derive more localised information than the bipolar leads I, II and III could offer. For this purpose from the existing limb electrodes, new leads aVR, aVF and avL were constructed.
- The purpose of lead aVR was to obtain specific information from the right upper side of the heart, such as the outflow tract of the right ventricle and the basal part of the septum.
- Electrocardiographer s consider lead aVR as giving reciprocal information from the left lateral side, being already covered by the leads aVL, II, V5 and V6. This has been the reason that lead aVR has become largely ignored.

Case Report:

- A 70 years old male presented to the casualty with the complaint of chest pain for past one day radiating to back associated with regurgitation of food and vomiting 15 episodes
- No history of palpitation
- No history breathlessness
- No history of sweating
- No history of swelling of limbs

General Examination:

Patient is conscious, oriented and afebrile
Mild pallor present
No pedal edema
BP – 150/100mmHg
PR – 90/min
RR – 22/min
CVS - S1, S2 heard
RS – B/L NVBS present
B/L Crepitation present
P/A – Soft, no tenderness and
No organomegaly
CNS - NFND

Keywords:

Early Diagnosis and Management of STEMI

Case Report: Unusual Presentations of Extremes Arrhythmias in Takotsubo Cardiomyopathy

Abhilasha Munisingh
SRM Medical College Hospital and Research Centre, Kattankulathur, Chennai, India

T. R. Muralidharan
SRM Medical College Hospital and Research Centre, Kattankulathur, Chennai, India

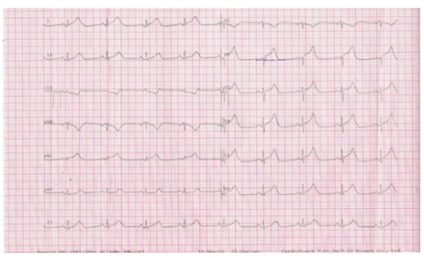
Abstract:

Introduction: Takotsubo cardiomyopathy or stress cardiomyopathy, first described in 1991 by Sato et al. named "Takotsubo" for its resemblance to the Japanese octopus' trap. A condition well known for transient and reversible LV dysfunction, predilection towards female sex (post-menopausal) with a mean age of 66.8yrs. Takotsubo cardiomyopathy is associated with numerous complications, such as LV obstruction, LV thrombus, conduction abnormalities complicating takotsubo cardiomyopathy. Our case report highlights the extremes of arrhythmias in stress cardiomyopathy.

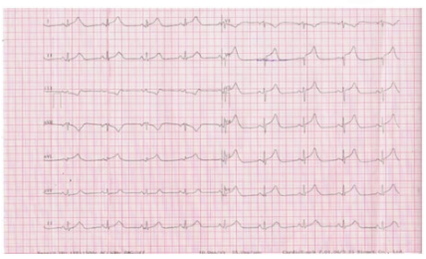
Case presentation:

CASE 1: A 62 years female patient with no known comorbidities came to ER with complaints of chest pain for a duration of 2 days, patient had visited local clinics for symptom relief, and on evaluating her ECG, she was referred to our center for further management.

Patient received in ER with above background history. The initial ECG taken the previous day showed sinus rhythm, ST-T changes noted in the antero-lateral leads (Fig-1). As compared to ECG taken at the ER showed a 2:1 AV block, with deep T wave inversion seen in V2/3, aVL and lead I, inferior leads and QT prolongation(fig-2). Trop I positive (1.47pg/ml).

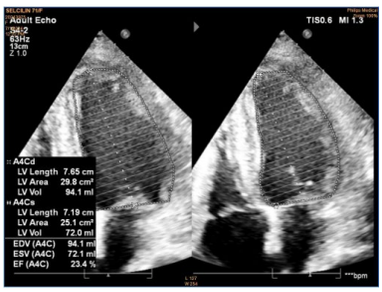


(fig-1)



(fig-2)

ECHO confirms regional wall motion abnormalities noted in LAD territory with mild LV dysfunction and LV EF of 44%. Basal hyperkinesia when compared to apical segments were appreciated. (fig-3).



(fig-3)

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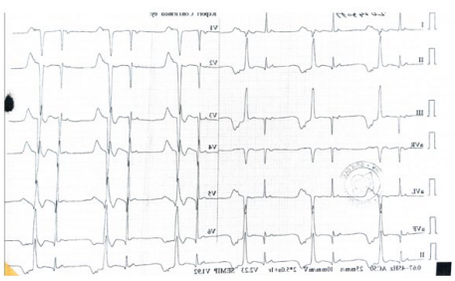
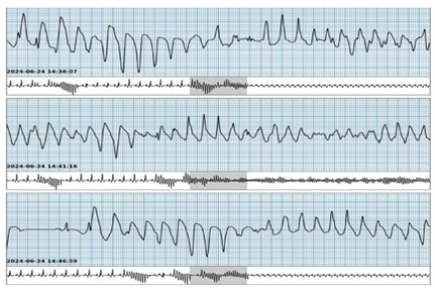
With a high suspicion of coronary pathology. The patient underwent coronary angiogram which showed normal epicardial coronaries.

While the patient was under observation, a new onset 2:1 block progressed to CHB intermittently. The complete heart block did not respond to Atropine, while patient remained hemodynamically stable and asymptomatic. The need for a pacemaker was discussed with patient family members. Respecting their decision to opt for medical management, patient was observed. At the time of discharge, patient remained asymptomatic, with gradual improvement seen in her LV functions, but rhythm disturbance persists as 2:1 Av block.

Case 2: A 71 yrs female, known diabetic and hypertensive for a decade. She developed shortness of breath (NYHA class III), features suggestive of pulmonary edema were noted and she underwent treatment. Patient had developed rhythm abnormalities. ECG showed ventricular bigeminy pattern(fig-4). 24 hrs Holter study showed polymorphic VT run max heart rate noted was 211 bpm suggestive of ischemic VT .(fig-5).

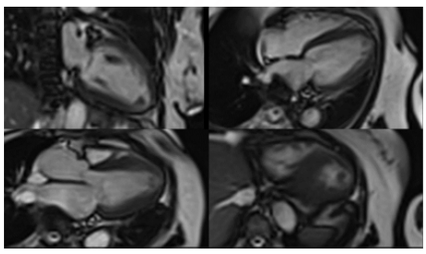


(fig-4)



(fig-5)

Echo showed global hypokinesia of LV with accentuated basal contraction and severe LV dysfunction of 24%, suggestive of Takotsubo cardiomyopathy. Relevant investigations were carried out followed by Left heart catheterization showed a normal epicardial coronaries. With the possibility of stress cardiomyopathy, the patient underwent Cardiac MRI showed biventricular dysfunction apical hypokinesia with thin scar. Pedunculated mass at the apex (10 X 10 mm) - thrombus/ myxoma noted at the akinetic segments. (Fig-6).



(fig-6)

The risk of sudden cardiac death associated with ventricular tachycardia and the need for ICD was considered in this case. Here again, the patient family opted for a conservative management.

The patient at the time of discharge, was put on anti-failure medications, anti-coagulant. On follow up, patient rhythm abnormalities had improved, and treatment continued on similar lines. With the need for ICD been emphasized.

Discussion: A primarily adrenergic stimulation resulting in myocardial stunning along with myocardial edema resulting in LV dysfunction, additionally, increased vagal tone is responsible for conduction abnormalities. Thought to be a benign and reversible condition. Takotsubo cardiomyopathy is associated with numerous complications, such as mimicking MI, LV obstruction, LV thrombus, cardio-embolic stroke, and conduction abnormalities complicating takotsubo cardiomyopathy been noted.5 Our first case presented mimicking an anterior wall MI with findings of intermittent Complete heart block and AV nodal block developing at a later period, while the patient remained asymptomatic. The underlying conduction abnormalities surfacing due to her present condition are to be pondered. A lack of adequate guidelines for permanent pacemakers in such scenarios and how long to wait for the rhythm abnormalities to be corrected is a question to be answered. Currently, our patient is under follow-up, she remains asymptomatic in 2:1 AV block. The second case developed pulmonary edema, which brought her to the ER, throwing light on her hidden rhythm abnormalities, ventricular arrhythmias, echo findings, and an MRI confirming the diagnosis of stress cardiomyopathy. The need for ICD was considered. Understanding that LV functions can improve over time, amidst persistent AV Nodal block and other rhythm abnormalities needs to be considered while choosing management and counseling the family.

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Conclusion: Takotsubo syndrome, a frequent cause of heart failure, presents new challenges in light of the latest knowledge on its consequences and treatment-related difficulties. With improved knowledge of its etiology and the role of genes, which will provide better guidelines for early diagnosis and management.

Keywords:

Stress Cardiomyopathy, Takotsubo Cardiomyopathy, Complete Heart Block, Ventricular Arrhythmias. Case Report

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Interesting Case of Scrub Typhus with Myocarditis

Dr. V V Sai Sumanth
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Dr. Suresh K
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Dr. Prabhu
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Dr. Baskaran Srinivasan
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Dr. Razook Fareedh
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Abstract:

Introduction & Aim: Scrub typhus is a mite-borne infectious disease caused by Orientia tsutsugamushi, a gram-negative intracellular bacterium. Myocarditis is rare complication of Scrub Typhus.

Case Report: A 50 year old female came to our institute with complaints of Fever and Generalised Myalgia for 4 days with no other significant past history. patient was conscious with stable vitals at the time of admission, All routine base line investigations, ECG, along with fever panel work up was done which showed leucocytopenia, thrombocytopenia & Scrub Igm+ diagnosed as a case of Scrub Typhus.

Patient treated conservatively with Doxycycline, Iv fluids, on Day 3 of admission patient developed sudden onset of chest pain, breathlessness with Repeat ECG showing sinus tachycardia, Twave inversion in v1-v5, with Elevation in 2sets of Troponin I, bed side 2d echo revealed LAD, Moderate LVD (LVEF-40%).

Patient was suspected to have Scrub Typhus induced Myocarditis and then patient was switched to parentral Doxycycline. Antiplatlets, Heparin was given after correcting Thrombocytopenia .pt very well improved over the stay in hospital with above treatment and discharged in hemodynamically stable status.

Conclusion: Although Viral Myocarditis is more common phenomenon one has to keep open eye on bacteriaal infection like scrub typhus causing Myocarditis and should be treated promptly.

Keywords:

Scrub Typhus, Bacterial Myocarditis, Thrombocytopenia

A Rare Case Series of Leptospirosis with Scrub Typhus

Dr. Patel Pooja Reddy
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. Anbarasu
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. Jayannan
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. Hareesh A
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. Jubeida
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

Introduction: Worldwide dissemination is observed for two zoonoses: scrub Typhus and leptospirosis. Acute fever sickness can have both of these significant causes. Both diseases have a wide range of clinical presentations, from minor to deadly. Due to a lack of clinical suspicion, a diagnosis of confection including leptospirosis and scrub typhus may go undiagnosed.

Aims And Objectives: To Study clinical and Biochemical profile of Co infection of Leptospirosis with scrub typhus.

Methods: Among patients of Fever with thrombocytopenia, clinical examination & biochemical tests of scrub typhus, Leptospirosis, dengue were done. The biochemical tests are scrub IgM, Lepto IgM, Leptospirosis Micro agglutination test, Dengue Ns1, IgM were done, Complete blood count, Radiological investigations, Liver function tests and eschar in clinical examination. The occupation of patients were considered to look for prevalance in specific occupation.

Results: Leptospirosis and scrub typhus are two common, dangerous infections that, if left untreated, can be fatal. Leptospirosis and scrub typhus can both have nonspecific clinical manifestations, including fever, headache, skin rash, myalgia, and conjunctival suffusion. In severe cases, leading to various complications. 4 cases of Leptospirosis with scrub typhus has been found in association in our study.

Conclusion: Both leptospirosis and Scrub typhus are neglected tropical disease with similar presenting features. Therefore, making a distinction between two diseases is difficult on clinical ground alone.Early detection is mandatory for to prevent complications & speedy recovery.

Keywords:

Scrub Typhus, Leptospirpsis, Dengue, Fever

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When Rhythm Fails- A Shocking Encounter with ARVD

Dr. R Sitharam
Omandurar Government Medical College, Chennai, India

Dr.Ramesh M.D
Omandurar Government Medical College, Chennai, India

Abstract:

Introduction: Arythmogenic Right Ventricular Dysplasia is an inherited condition characterized by fibro fatty replacement in Right ventricle. It has high predisposition to Sudden Cardiac Death. As the presentation is non specific ARVD can be a diagnostic challenge leading to delayed treatment.

Case report: A 39 year old male presented with complaints of palliative and giddiness. Upon receiving the patient was consious and oriented. Vitals showed BP:?, PR:?. ECG showed monomorphic Ventrucular tachycardia with LBBB pattern and heart rate >190 beats per minute. Electrical cardioversion was done and sinus rhythm was reverted.

Investigations: ECG: NSR, QRS axis normal, frequent VPC, origin- RVOT

ECHO- Altered septal motion, LV global hypokinesia, Ejection Fraction- 35%, Proximal RVOT- 40mm, Distal RVOT- 42 mm, increased trabeculations noted in Right Ventricle, moderate tricuspid regurgitation, Mild Pulmonary hypertension. No pericardial effusion. No clot

Cardiac MRI- Relatively dilated Right ventricle and Right Ventricular outflow tract. Dyskinetic pseudobulging of Right Ventricular free wall. Significantly reduced Right Ventricular Ejection Fraction. No late gadolinium enhancement reflecting scar or fibrosis.

Based on the above presentation, history and investigation, the case was diagnosed as Arythmogenic Right Ventricular Dysplasia with Biventricular Dysfunction

Treatment: After the initial electrical cardioversion patient was treated with antifailure measures and anti arythmic drugs. ICD implantation was done.

Conclusion: Arythmogenic Right Ventricular Dysplasia is a clinical entity characterized by ventricular arrhythmia and surviving ventricular pathology. It's prevalence is 1 in 5000 patients. The hall mark finding is the fibro-fatty infiltration of the myocardial. Structurally, RV dialatation, RV dysfunction, regional RV wall motion abnormality can be seen. Some patients can also have Left ventricular involvement.

Keywords:

ARVD, Arythmogenic Right Ventricular Dysplasia, Cardiac Death

Thyroid Conundrum - The SREAT Mystery

Dr. Mogalapu Sai Samhitha
Madras Medical College, Chennai, India

Abstract:

Introduction: The differential for endocrinopathies causing altered sensorium include dysglycemia, dyselectrolytemia, myxoedema coma, thyroid storm, hypo- and hypercortisolism and rarely the diagnosis of exclusion Steroid responsive encephalopathy due to autoimmune thyroiditis (SREAT) also. Here, I present a case report of a young female presenting with altered sensorium who turned out to have Hashimoto's encephalopathy.

Materials and Methods: A 25-year-old female with a known case of hypothyroidism, currently on T.thyroxine 100 mics, came to the casualty with a history of altered sensorium, seizures and somnolence for 3 days.No H/O fever, joint pains, rash, oral ulcers. History of intentional suicidal behaviour 6 months ago. On examination, she was drowsy, irritable GCS : 11/15.Vitals stable. Systemic examination was unremarkable except for hypertonia, hyperreflexia and B/L extensor plantar. No meningeal signs of irritation. Initial basic investigations were normal. TFT revealed TSH - 55.2 miU/ml, F.T4 - 1.2 ng/dl, Anti-TPO Ab of 596.1 IU/ml.USG neck suggestive of thyroiditis. On examination, fundus was normal. ANA profile negative. CSF analysis revealed the presence of raised protein levels (60mg/dl), acellular. CSF autoimmune encephalitis panel and viral rt pcr panel was negative. MRI brain and EEG revealed no significant abnormality. The psychiatric evaluation did not reveal any significant underlying condition.

Results: Having ruled out the common etiologies, we went into ruling out the possibility of paraneoplastic aetiology. Clinical and radiological examinations of the breast and ovaries were also normal. With the only positive clue of elevated Anti-TPO titres, Hashimoto's encephalopathy was suspected, and she was started on methylprednisolone 500 mg OD. The patient showed drastic improvement in the next 24 hours with full recovery of her CNS functions at 72 hours.

Conclusion: In young individuals presenting with altered sensorium, readily reversible causes like SREAT should always be considered.

Keywords:

Hashimoto's encephalopathy, SREAT, Endocrine encephalopathy, Autoimmune thyroiditis, Altered sensorium

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Thyroid the Troublemaker

Dr. Prabhakaran. A
Government Kilpauk Medical College, Chennai, India

Dr. Malathi
Government Royapettah Hospital, Chennai, India

Abstract:

Aims and Objectives: Reporting a rare case of hypothyroidism causing cerebral venous thrombosis.

Introduction: Elevated levels of TSH can lead to an increase in production of clotting factors in the blood. CVT occurs when blood clot forms in brain's venous sinuses. It is a rare disorder which leads to significant morbidity and mortality.

Design/Methods: A 20 yr -year-old female presented with altered sensorium and headache. Further workup lead to CVT. Her past history was significant for untreated hypothyroidism for past 4 years. Investigation into the etiology of her cerebral venous thrombosis included MRI Brain, Carotid Doppler, Lipid Profile, Viral markers, Hypercoagulable state profile, Echocardiogram, Fundus examination, Autoimmune profile, Thyroid function test.

Results: The above laboratory tests were significant for elevated TSH, normal hypercoagulable profile, left superior sagital and sigmoidal vein thrombosis and other workups for CVT were negative USG neck shows active thyroiditis with bilateral enlarged thyroids with anti TPO positive at high titres.

Conclusions: Autoimmune thyroiditis as a cause for CVT can be considered for after excluding other causes of CVT. Clinicians should be aware of dysthyroid and its thrombophilic properties for better patient treatment.

Summary: CVT is an uncommon presentation in hypothyroidism. There are multiple etiological factors for CVT. So etiological diagnosis for CVT is a challengable task. Hypothyroid might be the rare cause.

Keywords:

HYPOTHYROID, CVT

Severe Hyponatremia as an Atypical Presentation of Pituitary Macroadenoma

Dr. Kapildev. M
Government Kilpauk Medical College, Chennai, India

Dr. Ramesh Kumar
Government Kilpauk Medical College, Chennai, India

Abstract:

Introduction: Pituitary adenomas are the most common sellar region tumors accounting for 10-15% of all intracranial brain tumors.They are called macroadenomas if they are larger than 10mm.Microadenomas is they are smaller than 10mms. Approximately 70% adenomas are functional others are non functional.

Aims and Objectives: To investigate a case where a pituitary macroadenoma presented with Syndrome of Inappropriate Antidiuretic Hormone secretion (SIADH) leading to severe hyponatremia. The objectives are:

1. To identify the underlying cause of hyponatremia in a patient.
2. To evaluate the effectiveness of diagnostic imaging and hormonal assays in diagnosing SIADH associated with a pituitary adenoma.
3. To assess the clinical outcome following the surgical resection of the adenoma.

Design/Methods:

1. Patient Presentation and History:
- A 50-year-old male presented with symptoms including altered sensorium, and vomiting.
- Notable past medical history includes hypertension for the past 10 years.

2. Diagnostic Evaluation:
- MRI Brain:
- Hormone Profile Tests:To assess levels of prolactin, cortisol, and thyroid-stimulating hormone (TSH).
- Renal Function Tests:To evaluate kidney function and rule out renal causes of hyponatremia.
- Plasma and Urinary Osmolality: To confirm the diagnosis of SIADH.
- Urine Sodium Levels
- Lipid Profile
- Viral Markers
- Echocardiogram.
- Fundus Examination
- Thyroid Function Test

Results:

1. Imaging Findings:
- The MRI of the brain revealed a pituitary mass measuring approximately 14×13×11 mm, consistent with a macroadenoma.

2. Laboratory Findings:
- Initial Sodium Level: 107 mEq/L, indicating severe hyponatremia.
- Plasma Osmolality:250 mOsm/kg, below the normal range, consistent with SIADH.
- Urinary Osmolality: 455 mOsm/kg, elevated, supporting the diagnosis of SIADH.
- Urine Sodium Level:141 mEq/day, also indicative of SIADH.
- Prolactin Level: 41.1 ng/ml, elevated, suggesting possible prolactin-secreting adenoma.
- Cortisol Level: 5.65 µg/dl, within the low normal range.
- Thyroid-Stimulating Hormone (TSH): 2.956 µIU/ml, within the normal range.

3. Surgical Outcome:
- The patient underwent a transsphenoidal resection of the pituitary macroadenoma.
- Postoperative follow-up showed significant improvement in symptoms and resolution of hyponatremia.

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4. Follow-Up and Recovery:
- Post-surgery, the patient's sodium levels normalized, and neurological symptoms improved.
- Regular follow-up confirmed stable hormonal levels and absence of residual tumor or recurrent symptoms.

Summary: Hyponatremia is not an uncommon presentation. There are multiple overlapping differential diagnosis. So etiological diagnosis is a challengeable task. In Hyponatremia due to SIADH Pituitary adenoma might be the rare cause.

Conclusions: In hyponatremia due to SIADH, pituitary adenoma might be the rare cause. Here we present a case of pituitary macroadenoma with an uncommon presentation of SIADH causing severe hyponatremia.

Keywords:

HYPONATREMIA, SIADH, PITUITARY MACROADENOMA

An Unusual Case of Bradycardia- Carotid Sinus Syndrome Secondary to Neck Mass

Dr. Praveen Kumar
Government Kilpauk Medical College, Chennai, India

Dr. Shaik Sulaiman Meeran
Government Kilpauk Medical College, Chennai, India

Dr. R.B.S.Manian
Government Kilpauk Medical College, Chennai, India

Abstract:

Introduction: Carotid sinus syndrome is a type of reflex syncope or near-syncope with symptoms (eg, syncope, lightheadedness) caused by Carotid sinus hypersensitivity manifesting during activities of daily life that put pressure on the carotid sinus (eg, turning the neck, looking upward). In patients with head and neck cancer, syncope may appear as an initial manifest of the disease due to compression of carotid sinus.

Aim and Objectives: To Reveal the unusual cause of bradycardia

Methods: A 50 year old male who is known smoker and old PTB presented to the casualty with complaints of giddiness for 2 days and one episode of fainting the previous day. The patient had no other cardiac or neurological complaints. On examination the patient had Pulse rate of 36/min and Blood pressure of 80/50 mmHg. Diagnostic work up included ECG, blood tests, bed side echocardiogram, CT neck, and PET CT.

Results: ECG revealed sinus bradycardia. Due to symptomatic bradycardia and hypotension, the patient was about to be given atropine when the bradycardia resolved spontaneously and the patient's blood pressure improved. When examined further the patient was found to have a neck mass of 2x 1.5 cm over the right neck.

On investigating further, his blood work up for was normal except for mild leukocytosis. Bedside echocardiogram was normal. CT neck revealed nodal mass in upper jugular region. While in admission the patient developed another episode of bradycardia and hypotension when the patient turned his neck to the right side. The symptoms resolved as soon as he turned his neck straight.

The patient had recurrence of similar symptoms and signs when attempting to turn his neck to the rightside. PET CT was done which revealed secondaries neck with unknown primary. FNAC was suggestive of malignancy.

The patient was taken over by oncology department for further management.

Summary: Carotid sinus syndrome accounts for 1 % of cases of syncope and more common in males and in cases with extensive cervical node involvement.

Conclusion: We hereby see a case of bradycardia of non-cardiac origin and the need for proper physical examination in all patients presenting to casualty.

Keywords:

Carotid Sinus Syndrome, Syncope, Non-Cardiac Bradycardia, Neck Mass

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Rare Presentation of Liddle's Syndrome – Adult Onset

Dr. Greeshma S
Government Kilpauk Medical College, Chennai, India

Dr. Geetha
Government Kilpauk Medical College, Chennai, India

Abstract:

Introduction: Liddle's syndrome is a rare genetic disorder typically diagnosed in younger individuals, characterized by hypertension, hypokalemic metabolic alkalosis, hyporeninemia, and suppressed aldosterone secretion. It results from mutations in the subunits of the Epithelial Sodium Channel, leading to inappropriate sodium absorption in the distal renal tubules.

Aims and Objectives:

- To highlight a rare case of liddle's syndrome presenting in an adult.
- To emphasize the importance of considering Liddle's syndrome in the differential diagnosis of resistant hypertension/ hypertension, even in older patients.
- To demonstrate the diagnostic approach and treatment response in an adult –onset case of Liddle's syndrome.

Methods:

Patient evaluation: Detailed medical history and physical examination of the 54 –year-old woman presenting with resistant hypertension, vomiting and weakness

Diagnostic Tests: Initial laboratory investigations with complete blood count, renal function test, liver function test, CT and MRI of the brain, nerve conduction studies for neurological evaluation, and laboratory tests for serum potassium, urinary potassium, bicarbonate levels, plasma renin activity and plasma aldosterone concentration.

Adrenal imaging: CT scan of the adrenal glands to rule out adrenal tumours.

Genetic study – whole exon sequencing

Results: Investigation showed hypokalemia with metabolic alkalosis, normal aldosterone level. Following the initiation of amiloride, the patient experienced significant improvement in blood pressure control and resolution of hypokalemia and metabolic alkalosis. Clinical follow-ups showed stable blood pressure and normalized electrolyte levels.

Summary: This case report underscores the importance of including Liddle's syndrome in the differential diagnosis of resistant hypertension, even in adult patients. The successful management of this condition with amiloride illustrates the effectiveness of targeted treatment and highlights the need for awareness of such rare disorders in clinical practice.

Conclusion: Liddle's syndrome, though rare in adults, should be considered in the differential diagnosis of resistant hypertension in older patients. Early recognition and targeted treatment, such as amiloride, are crucial for effective management and can lead to substantial clinical improvement. This case highlights the importance of considering genetic and rare causes of hypertension in atypical presentations.

Keywords:

Liddle's Syndrome, Resistant Hypertension, Amiloride Treatment, ENac Mutation

A Rare Case of Hypoglycaemic Disorder

Dr. Shaik Sulaiman Meeran
Government Kilpauk Medical College, Chennai, India

Dr. Ramesh Kumar
Government Kilpauk Medical College, Chennai, India

Dr. Umamaheshwari
Government Kilpauk Medical College, Chennai, India

Dr. Thangaprajan
Government Kilpauk Medical College, Chennai, India

Dr. Bhargavi Sindhuja
Government Kilpauk Medical College, Chennai, India

Dr. Sivaprakash. C
Government Kilpauk Medical College, Chennai, India

Abstract:

A 45 yr old lady presented to the ER with involuntary movements involving all 4 limbs associated with uprolling of eyeballs and tongue bite, vitals-PR-86/min, BP-130/80mmhg, cbg-45mg/d.known case of GRAVE'S DISEASE and on T.methimazole 30mg/day. Patient was managed with 25%dextrose, CECT Abdomen were normal, 75g of oral glucose tolerance test showed abnormal increase in total insulin with delayed symptomatic hypoglycemia after 4 hrs and positive for insulin auto antibodies and a diagnosis of methimazole induced HIRATA'S DISORDER was made and patient was treated accordingly.

Conclusion: All cases of recurrent hypoglycemia should be evaluated. HIRATA'S disease is usually associated with autoimmune disease and can be precipitated by drugs with sulphydryl groups

Keywords:

Insulin Autoimmune Syndrome, IAS, Hirata, Hypoglycemia, Autoimmunity

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Dilated Cardiomyopathy Due to Hypocalcaemia: A Case Report

Dr. V. VeeraVignesh
Sree Balaji Medical College and Hospital, Chennai, India

Dr. V. Padma
Sree Balaji Medical College and Hospital, Chennai, India

Dr. S. V.Sathyapriya
Sree Balaji Medical College and Hospital, Chennai, India

Dr. R. Mathisha Ebby
Sree Balaji Medical College and Hospital, Chennai, India

Abstract:

Hypocalcaemia is a rare, but reversible, cause of dilated cardiomyopathy causing heart failure. Several case reports have been reported on reversible cardiomyopathy secondary to hypocalcaemia. We report a case of 54-year-old female Sri Lankan patient who presented with shortness of breath and was diagnosed with heart failure with reduced ejection fraction due to dilated cardiomyopathy. The etiology for dilated cardiomyopathy was identified as hypocalciemic cardiomyopathy, secondary to primary hypoparathyroidism, which was successfully treated with calcium and vitamin D replacement therapy.

Introduction: Dilated cardiomyopathy (DCM) is a non-ischaemic heart muscle disease with structural and functional myocardial abnormalities. The clinical picture of DCM is defined by left or biventricular dilatation and systolic dysfunction in the absence of coronary artery disease, hypertension, valvular disease, or congenital heart disease. About 30% of DCM is primary or familial with a genetic basis. Several secondary causes for dilated cardiomyopathy have been identified, the most common being infective myocarditis, toxins including alcohol, chemotherapeutic agents, metals and other compounds, autoimmune causes, neuromuscular disorders, and endocrine disorder. Hypocalcemia is identified as a reversible cause of dilated cardiomyopathy. Intracellular calcium concentration changes are essential for cardiac myocyte activity. The increase of intracellular calcium concentration transiting through calcium channels is followed by calcium release from sarcoplasmic reticulum, its binding to the troponin–tropomyosin complex, and stimulation of the mutual binding of actin and myosin. The most important clinically relevant feature of cardiomyopathy secondary to hypocalcemia is it can be reversed with propertreatment with calcium and vitamin D replacement. We report a case of reversible dilated cardiomyopathy due to hypocalcemia secondary to primary hypoparathyroidism in a female patient.

Case Report: A 54-year-old patient with long standing type 2 diabetes mellitus, bronchial asthma, and hypothyroidism on treatment with metformin, thyroxin, and inhaled corticosteroids was admitted with sudden worsening of shortness of breath over 3 days. She denied any history of worsening angina, fever, cough, or wheezing. She was dyspneic with orthopnea. She had gross bilateral ankle edema up to the mid calves, with a pulse rate of 100 per minute and a blood pressure of 100/70 mmHg. She had bilateral lung crepitations extending up to the upper zone without any evidence of bronchoconstriction or consolidation. Her hemoglobin level was 13.6 g/dL, serum creatinine was 1.2 mg/gL, and serum albumin was 4.2 g/dL, all of which were in the normal range. Thyroid stimulating hormone (TSH) level was 3.5 mIU/L and was normal. Electrocardiogram (ECG) had only sinus tachycardia and no ischemic changes. Troponin I was negative. Brain natriuretic peptide (BNP) was 1200 pg/mL and was signiifcantly elevated. Her 2D Echo revealed severely impaired left ventricular systolic function with an ejection fraction of 30%. All four chambers of the heart were dilated with severely impaired right ventricular function as well. There was a functional grade II mitral regurgitation and tricuspid regurgitation. A clinical diagnosis of dilated cardiomyopathy with heart failure with reduced ejection fraction (HFrEF) was made. On the acute presentation to the emergency treatment unit, the patient was managed with oxygen support with a continuous positive airway pressure (CPAP) machine and with intravenous frusemide bolus followed by an infusion. After the acute management, the patient was commenced on aspirin, atorvastatin, enalapril, and spironolactone. The patient clinically improved over a course of 3 days of inward stay. Evaluating the cause of dilated cardiomyopathy with HFrEF, the patient did not give a family history suggestive of a similar cardiac illness. There was no history of angina or other acute coronary events in the past. The

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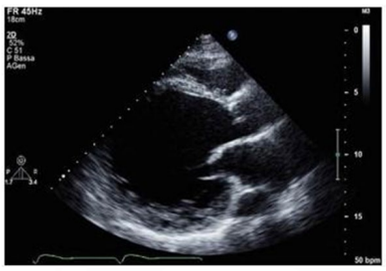
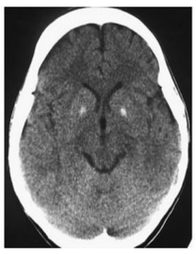
coronary angiogram done a few days after stabilization revealed only minor coronary artery disease that cannot explain the current presentation due to obstructive coronaries. The patient was with normal thyroid-stimulating hormone (TSH). There was no history suggestive of myocarditis or other connective tissue disorders. However, the patient was detected to have a very low serum ionized calcium level of 2.0 mg/dL. Further evaluation of hypocalcemia revealed a very low level of intact parathyroid hormone (PTH) of 2 pg/mL. Serum 17 OH cholecalciferol level was low with 10 ng/ mL. The non-contrast computed tomography (CT) of the brain also showed basal ganglia calcifications, which supports the diagnosis of primary hypoparathyroidism. The patient was treated with high dose calcium and vitamin D therapy liasing with the endocrinology team. The calcium and vitamin D levels were assessed weekly during the first few weeks of treatment until achieving the normal range. Subsequently, the calcium level was monitored biweekly and monthly thereafter. Along with the treatment of hypocalcemia, she was also treated with pillars of HFrEF therapy, angiotensin converting enzyme inhibitor (enalapril), beta blocker (bisoprolol), and aldosterone antagonist (spironolactone). However, the patient was unable to afford sodium glucose cotransporter 2 (SGLT2) inhibitor therapy, as the medicine was not freely available in the state sector. Initially the patients symptoms, and the two-dimensional echo improvement was assessed in 2 weeks intervals, and then it was assessed monthly. After continuous follow-up with the therapy for hypocalcemia and the HFrEF, the patient clinically improved. In 3 months, the cardiac functions reverted back to a normal systolic function, with an ejection fraction of 55%.The patient is still on calcium supplements and her calcium level is monitored once a month with the assessment of her cardiac functions.





Discussion: Calcium is an integral ion in the cardiac myocyte contraction [4]. Intracellular calcium concentration changes are essential for cardiac myocyte activity [4]. During cardiac action potential, L-type Ca^{2+} channels are activated, and a majority of Ca^{2+} enters the cell through the Ca^{2+} current. Other exchanges, such as Na^{+}–Ca^{2+} exchange also contributes for the intracellular Ca^{2+} influx. Influx of the intracellular Ca^{2+} triggers Ca^{2+} release from the sarcoplasmic reticulum. The net effect of increased intracellular Ca^{2+} is the binding of intracellular Ca^{2+} to multiple cytosolic Ca^{2+} buffers, of which the thin filament protein troponin C acts as a key cytosolic buffer. Binding of Ca^{2+} to troponin C activates the myofilaments to contraction. Similarly, during diastole, the intracellular Ca^{2+} concentration declines, enabling the Ca^{2+} to dissociate from troponin C, thereby stopping the contraction and enabling relaxation of the cardiac myocyte. There are four transporters that contribute in reduction of the concentration during diastole, namely: sarcoplasmic reticulum Ca^{2+}–ATPase, sarcolemmal Na^{+}–Ca^{2+} exchange, sarcolemmal Ca^{2+}–ATPase, and mitochondrial Ca^{2+} uniporter [9]. It is evident from this physiology that calcium plays a vital role in both systolic contraction as well as diastolic relaxation of the cardiac myocyte. Thereby, hypocalcemia can result in severe dysfunction of cardiac myocyte, resulting in heart failure. The deficiency of calcium affects cardiac myocyte contraction, resulting in a rare form of reversible dilated cardiomyopathy causing heart failure with reduced ejection fraction, which has been reported in few cases around the world. Tis case adds to the limited literature on reported case of reversible dilated cardiomyopathy secondary to hypocalcemia. Such cases reported in this region of the world are rare.

Conclusion: This is a rare case of reversible dilated cardiomyopathy with HFrEF in a middle-aged patient secondary to primary hypoparathyroidism. Given the history of hypothyroidism in this patient in the past and the newly diagnosed primary hypothyroidism, the possibility is raised of an autoimmune polyglandular syndrome in this patient.

However, the absence of other endocrine manifestations and the manifestation of the disease in middle age, makes this rare diagnosis less likely in this case. The patient was successfully treated with calcium and vitamin D replacement, resulting in improvement of the heart failure and cardiomyopathy. Tis highlights the importance of being vigilant on this rare cause of heart failure as the proper diagnosis and treatment leads to reversal of the cardiac functions.

Keywords:

Dilated Cardiomyopathy, Hypocalcaemia

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Case Report: Management of Supraventricular Tachycardia in a Patient with Severe Mitral Stenosis and Comorbidities

Vaghani Krunal Jayeshbhai
Sree Balaji Medical College and Hospital, Chennai, India

Abstract:

A 56-year-old female with a history significant for severe mitral stenosis secondary to rheumatic heart disease and subsequent mitral valve replacement in 2019, systemic hypertension, and type 2 diabetes mellitus presented to the ICU with complaints of chest discomfort persisting for two days and palpitations since the previous evening. She denied symptoms such as dyspnea, sweating, headache, giddiness, orthopnea, paroxysmal nocturnal dyspnea, syncope, cough with expectoration, nausea, or vomiting. The patient was on regular treatment for hypertension and diabetes mellitus, including T. clopidogrel and aspirin 75/75 mg once daily, and T. metoprolol XT 25 mg once daily. On examination, she was conscious, oriented, afebrile, with a blood pressure of 130/80 mm Hg in the right upper limb in the supine position. Her pulse rate was rapid at 176 beats per minute, regular in rhythm, with a low volume pulse and no specific character noted. Oxygen saturation was 98% on room air, and respiratory rate was 25 breaths per minute. Cardiovascular examination revealed normal heart sounds (S1S2), tachycardia, and a mid-diastolic murmur. Respiratory examination showed bilateral air entry with no added sounds. Central nervous system examination was within normal limits, and abdominal examination revealed a soft, non-tender abdomen.

Keywords:

Mitral Stenosis, Rheumatic Heart Disease, Hypertension, Type 2 Diabetes Mellitus

Distal Renal Tubular Acidosis and Hypokalemia: Unveiling Sjogren's Syndrome as an Underlying Metabolic Disorder

Dr. Vijayalakshmi. V
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. Rohini. I
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. Umamaheshwari. B
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. Vijayalakshmi. G
Govt. Stanley Medical College and Hospital, Chennai, India

Abstract:

Introduction: Distal renal tubular acidosis (DRTA) is a metabolic disorder where the kidneys fail to acidify urine, leading to metabolic acidosis with a normal anion gap and hypokalemia. DRTA can be secondary to systemic diseases, including autoimmune disorders like Sjogren's syndrome, which primarily affects exocrine glands but can also impact renal function. Recognizing hypokalemia as a potential early sign of Sjogren's syndrome can facilitate timely diagnosis and treatment of these intertwined conditions.

Case Report: A 36-year-old female presented with sudden weakness in both lower and upper limbs over one day, without any history of fever, diarrhea, or animal bites. Physical examination showed normal vital signs and intact higher mental functions. However, she exhibited hypotonia and diminished reflexes in all four limbs, with muscle power reduced to 2/5 in both proximal and distal muscle groups. Serum potassium was critically low at 2.2 mEq/L, while renal and liver function tests were within normal limits. Urine pH was greater than 5.5, and there was no history of diuretic use, vomiting, or diarrhea. Arterial blood gas analysis revealed normal anion-gap metabolic acidosis, correlating with severe hypokalemia. These findings, alongside the presence of bilateral medullary nephrocalcinosis on abdominal ultrasound, led to a diagnosis of distal renal tubular acidosis (DRTA). Additionally, the patient had a history of dry eyes, and Schirmer's test was positive. Lip biopsy of the minor salivary glands showed lymphocytic infiltrate. Autoimmune screening revealed positive anti-Ro (SSA) antibodies. The patient was subsequently diagnosed with Sjogren's syndrome and initiated on oral steroids.

Conclusion: Distal RTA can manifest with hypokalemic symptoms such as muscle weakness and may be secondary to systemic diseases like SLE and Sjögren's syndrome. Management includes potassium supplementation, addressing the underlying autoimmune condition, and regular monitoring to ensure effective treatment and better patient outcomes.

Keywords:

Distal Renal Tubular Acidosis (DRTA), Hypokalemia, Sjogren's Syndrome, Metabolic Acidosis

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A Rare Case of Arch of Arota Aneurysm

Dr. Palwai Santhoshi*
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Dr. K Nagarajan
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Dr. Lanord Stanley Jawahar
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Abstract:

A 90 year old female, housewife by occupation came with the complaints of shortness of breath grade 2 NYHA since 6 months, insidious in onset gradually progressed from grade 2 to grade 3 NYHA initially which progressed to grade 4 MMRC over past 1 week, aggravated on exertion, relieved on rest.

H/o bilateral pitting oedema present for 1 month. H/o Orthopnea 2 episode and PND

Past History: K/C/O HYPERTENSION FOR 5 YEARS ON REGULAR

RS: NORMAL VESICULAR BREATH SOUND, BILATERAL CORASE CREPITATION

ECG: Normal sinus rhythm, T wave inversions in V1,V2,V3,V4,V5 ,V6 and inferior leads

Chest X-Ray: Cardiomegaly present, Widened mediastinum with prominent aortic arch and knuckle

2D ECHO: Largely dilated LA, LV, GLOBAL LV HYPOKINESIA, EF-30%, mild TR, mild MR, Normal valves, No Effusion, No evidence of shunt

HRCT: Fusiform dilatation of arch of aorta predominantly involving proximal arch with no signs of rupture in the present study Origin of brachiocephalic trunk appears mildly prominent and ectatic. The arch appears to displace the trachea towards right Cardiomegaly-features suggestive of aortic arch aneurysm- right mild plural effusion-fibrotic changes with traction bronchiectasis and brochiolectatic changes involving bilateral lung fields as described above.

Based on the above clinical findings and investigations, patient was diagnosed to have aortic arch aneurysm/congestive cardiac failure (ef 30%)/shtn/dm-2, Patient was started on appropriate medical management, patient improved symptomatically. Patient's prognosis was explained to the attenders and the need for TEVAR in the near future is explained to them.

Keywords:

Shortness of Breath, H/O Bilateral Pitting Oedema, Prominent Aortic Arch and Knuckle, Fusiform Dilatation of Arch of Aorta

Lateral Medullary Syndrome/Wallenberg Syndrome – A Case Report

Dr. Naveen Chandar A
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. Anbazhagan G
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. Meyyammai C T
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

Background: Lateral Medullary Syndrome is an acute onset syndrome caused due to thrombus or emboli that affects the blood supply to the lateral part of the medulla. It is characterized by Vertigo, dizziness, gait disturbances, difficulty in swallowing, hiccups and sensory loss.

Methodology: We report a case of an middle aged man who presented with giddiness, swaying to right side and later diagnosed to have lateral medullary syndrome.

Results: A Middle aged male presented with complaints of swaying to right side on standing from sitting position. On further history, he complained of giddiness, headache. On Clinical examination, truncal ataxia present, MRI Brain showed acute non hemorrhagic infarct in right medulla oblongata. He was treated for ischemic stroke.

Conclusion: Lateral medullary syndrome may present as swaying to the side of lesion, with giddiness, truncal ataxia in early stage, without any signs of horner's syndrome. Early recognition and prompt intervention, can significantly improve patient outcomes, preventing further complications.

Keywords:

Lateral Medullary Syndrome, PICA, Brainstem Stroke, Horner's Syndrome, Ataxia, Wallenberg Syndrome

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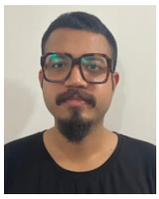

A Rare presentation of Decompensated Liver Disease in Sickle Cell Disease

Dr. Mrinal Hazarika
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. D Anbazhagan
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. C. T. Meyyammai
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

Introduction: Hepatobiliary complications of sickle cell disease are relatively rare but well recognised in literature. Although cirrhosis has been reported in sickle cell disease, however no effective therapeutic approaches have been recognised either to prevent or treat this condition.

Objective: To evaluate the hepatobiliary complications linked with Sickle Cell Disease.

Case Discussion: A 29 year old male patient with Sickle Cell Disease presented with abdominal distension, bilateral lower limb swelling for 2 months and blood vomiting for 2 days. Clinical examination: vital signs were within normal limit but pallor, icterus, bilateral pitting pedal edema was noted. Systemic examination revealed hepatosplenomegaly, signs of ascites and portal hypertension. There was no history of blood transfusion and alcohol intake.

Methods: Diagnosis and evaluation was done through history taking, physical examination, CBC, Peripheral Smear, HbE, HPLC, LFT, RFT, S. LDH, Iron Profile, USG whole abdomen, Upper GI Endoscopy, Ascitic Fluid Tapping and Ascitic Fluid Analysis.

Results: Hb-5.3g%, Platelet- 45000, Peripheral smear- Multiple Sickle Cells noted
HbE-sS pattern, HPLC: Hbs-80.2, HbAo-17.1, HbA2-2.9, HbF-17.6
Serum protein-7.3, Albumin-2.5, Total Bilirubin-10, Direct Bilirubin-8.7, AST-104, ALT-94, ALP-35
PT-30 sec, INR-2.5, Hypoalbunemia-2.2g/dl, S. LDH- 1562 U/L
USG Whole Abdomen: Moderate Ascites, Hepatomegaly, Splenomegaly with Gall-bladder sludge, dilated Portal Vein with Ascitic Fluid Analysis revealing SAAG 1.8
Upper GI Endoscopy: Grade 2 bleeding varices and markers for Chronic Hepatitis B and C are negative and Serum Ferritin-54, RFT, ECG, 2D-ECHO was normal.

Conclusion: Evaluation of Chronic Liver Disease should be carried out routinely in all patients with SCD (Sickle Cell Disease). Early identification and prompt intervention prevent or reduce the complications, thus reduce the overall morbidity and mortality associated with SCD.

Keywords:

Sickle Cell Anemia, DCLD, Non Cirrhotic Portal Hypertension

A Rare Case of Systemic Lupus Erythematosus Flare Caused by Anti Tubercular Therapy

Dr. Deva K.S
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. Srrinivasagalu
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. Meiyammai
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

Background: Drug Induced Lupus Erythematosus (DILE) is a rare condition. The association between Anti Tubercular Therapy (ATT), specifically rifampicin and isoniazid, and Systemic Lupus Erythematosus (SLE) flare-ups is crucial, given the rising incidence of SLE in India alongside a high prevalence of tuberculosis.

Case Report: A 15-year-old female, diagnosed with SLE for one year, presented with myalgia, chest pain, breathlessness, skin rashes, and oral ulcers after one month of ATT for tuberculous lymphadenitis. Examination revealed normal vital signs and systemic evaluations, but notable erythematous macular rashes and oral ulcers. Investigations showed elevated dsDNA and reduced complement levels, with imaging indicating emphysematous changes. ATT was discontinued, and intravenous steroids were administered, leading to symptom resolution within a week. Upon rechallenge, rifampicin was identified as the causative agent of the DILE flare. The patient was gradually desensitized to rifampicin under steroid cover and discharged with a fixed-dose combination of four ATT drugs.

Discussion: Genetic predispositions such as HLA DR4, HLA DR0301, and C4 null allele are associated with DILE. Cutaneous manifestations are common, and symptoms typically resolve within weeks of discontinuing the offending medication. This case underscores the importance of recognizing DILE in patients undergoing ATT, especially in regions with high tuberculosis and SLE prevalence.

Keywords:

Systemic Lupus Erythematosus Flare, Anti Tubercular Therapy, Anti Tubercular Therapy (ATT), Systemic Lupus Erythematosus (SLE)

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The Blurry Truth – A Rare Presentation of Nonketotic Hyperglycemia as Occipital Lobe Seizures

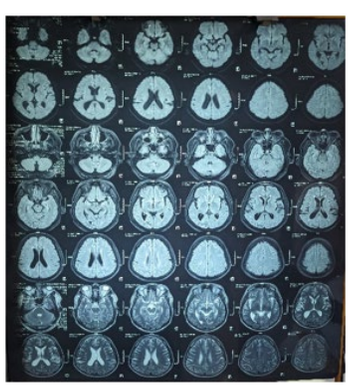
Dr. Aadarsh.V
Sri Muthukumaran Medical College Hospital and Research Institute, Chennai, India

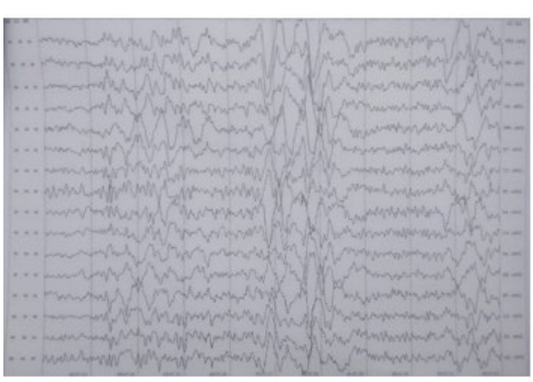
Dr. Pradeep Chakaravarthy
Sri Muthukumaran Medical College Hospital and Research Institute, Chennai, India

Dr. K.V. Rajalakshmi
Sri Muthukumaran Medical College Hospital and Research Institute, Chennai, India

Abstract:

Up to 25% of Diabetic nonketotic hyperglycemia can present with seizures with focal motor seizures being the prominent type. Occipital lobe seizure is a rare manifestation of nonketotic hyperglycemia. We present a rare case of nonketotic hyperglycemia induced occipital lobe seizures and discuss the effect of HbA1c on seizure activity, the imaging results and management with antiepileptic drugs, glycemic control and fluid management. We present a 48-year-old gentleman with poorly controlled type 2 diabetes mellitus and hypertension who presented with acute onset left sided headache of throbbing type and episodic visual hallucination. There was episodic left beating nystagmus and left upper limb posturing, each episode lasting for 3 mins with inability to visualize on the left side in between episodes. Laboratory abnormalities included a capillary blood glucose level of 380 mg/dl, serum creatinine of 1.4 mg/dl, HbA1c level of 11.0%. Serum Osmolality was 288mOsm/kg. Other metabolic workup was non remarkable. Magnetic resonance imaging showed T2 FLAIR subcortical hypointensity in right temporal and occipital region with no diffusion restriction. These findings decreased in follow-up MRI. The EEG captured generalized spike and wake discharges in the right occipital region with intermittent bursts and slowing. Other causes like Subacute infarct, CNS vasculitis, encephalitis were ruled out. Hence nonketotic hyperglycemia was considered as the etiology for the occipital lobe seizure. A high degree of clinical suspicion is warranted to recognize nonketotic hyperglycemia in the differential diagnosis of patients with visual abnormalities and seizures, especially when the MRI shows focal T2 FLAIR subcortical hypointensities.





Keywords:

Nonketotic Hyperglycemia, Occipital Lobe, Seizures, HbA1c

PTH Independent Hypercalcemia in Grave's Disease

Anjali K
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. Ramakrishnan SR
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. Sudha M
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Abstract:

Hyperthyroidism is associated with mild to moderate levels of hypercalcemia in approximately 20% of patients, but severe hypercalcemia is rare. Hypercalcemia associated with thyrotoxicosis is usually asymptomatic. Increased osteoclastogenesis is one of the mechanisms underlying this etiology. We are presenting a case of a 53 year old female, who came with complaints of vomiting and abdomen pain. On evaluation she was found to have hypercalcemia with suppressed PTH levels. Further work up showed that patient had hyperthyroidism due to Grave's disease. PET CT was also done to rule out paraneoplastic cause of hypercalcemia which turned out to be normal.

This is a case of an atypical presentation of hyperthyroidism induced symptomatic hypercalcemia where the presenting feature is symptomatic hypercalcemia.

Treatment of hypercalcemia abated the symptoms and the patient was put on antithyroid drugs(mention the drug). It underlines the fact that hyperthyroidism should be considered as a differential for hypercalcemia after other causes are ruled out.

Keywords:

PTH Independent Hypercalcemia, Grave's Disease, Hyperthyroidism

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A Case Report of Cardiocerebral Infarction - "Two Clots in Cahoots"

Dr. Aswini S
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Dr. Baskaran Srinivasan
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Dr. Suresh Kannan
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Abstract:

Introduction: Cardiocerebral infarction (CCI) is the rare occurrence of acute ischemic stroke (AIS) and acute myocardial infarction (AMI), either at the same time or one after the other. There are three types of CCI. Type 1: AIS with AMI. Type 2: AIS with recent myocardial infarction. Type 3: recent ischemic stroke with AMI. The main goal is timely reperfusion of both cardiac and cerebral circulation which includes Revascularization (PCI vs Mechanical thrombectomy), thrombolysis within window period, antiplatelet or anti coagulation therapy.

Case report: A 60 years old male, chronic smoker with no comorbidities presented with complaints of acute onset, non progressive weakness of right upper limb (NIHSS 4). Vitals were stable. On examination, no evidence of higher mental function/ cranial nerve, sensory, bowel and bladder involvement and no cardiac complaints. Patient was provisionally diagnosed as CVA right upper limb monoparesis. NCCT Brain showed Acute infarct in right posterior parietal lobe and left frontal lobe. Labs revealed Troponin I – 0.8, 2nd set – 25 with ST elevation in lead II, III, aVF with reciprocal changes ST depression in V1 – V5. Echo showed Inferior wall infero-septum hypokinetic with preserved wall thickness Mild LV dysfunction (LVEF~45 %). Coronary Angiogram revealed proximal LCX totally occluded with thrombus RCA – Co-dominant, minor plaquing. Patient taken for emergency PTCA to LCX. Patient significantly improved and discharged with triple antithrombotic therapy.

Conclusion: Management of CCI poses a great challenge for practitioners, where 1) Treatment strategies to perfuse both brain and myocardium. 2) Risk of cardiac tamponade and myocardial rupture with intravenous thrombolytic therapy. 3) Difference in dosage of thrombolytics for AIS and AMI. 4) Risk of intracerebral haemorrhage following administration of Anti-coagulation or Anti-platelet therapy. PCI strategy for AMI as the first strategy due to high mortality remains the preferred choice despite the risk of hemorrhagic transformation in AIS.

Keywords:

Cardiocerebral Infarction, Percutaneous Coronory Intervention, Thrombolysis, Antithrombotic Therapy

A Rare Case Report of Primary Tricuspid Valve Regurgitation Presenting as Right Sided Heart Failure - No Longer the "Forgotten Valve"

Dr. Suseendhran Srinivasan
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Dr. Suresh Kannan
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Dr. Damodharan J
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Dr. Jagadeesan M
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Dr. Prasanna Karthik
Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

Abstract:

Introduction: Functional Tricuspid Regurgitation (TR) is the common form of TR and is due to dilation of the tricuspid valve annulus from RV or RA remodelling. Most common etiologies for functional TR are left heart failure, aortic or mitral valve disease, or PAH. Tricuspid valve prolapse, carcinoid heart disease, endomyocardial fibrosis, radiation, infective endocarditis, leaflet trauma and Ebstein's anomaly produce primary TR.

Case report: A 50 years old with no comorbidities presented with c/o bilateral leg swelling for 6 months with breathlessness, abdominal distension and scrotal swelling. Patient had h/o tricuspid valve infective endocarditis and treated in 2008. O/E bilateral pitting pedal edema was present and his vitals were stable. On S/E: CVS-Tricuspid area: High pitched soft blowing holosystolic murmur of grade 4 is heard with the patient in supine position with breath held in inspiration. RS: bilateral infrascapular crepitations. PA: Soft, distended with midline surgical site herniation present with right hypochondric tenderness. ECG showed Atrial Fibrillation (AF) with CVR and RBBB. CXR showed cardiomegaly. 2D echo showed AF during study, Dilated RA RV, Dilated pulmonary arteries, D shaped septum, Right ventricle systolic dysfunction present, Non coapting Tricuspid valve, Severe TR, No PAH, Adequate LVSF (EF-50%), IVC dilated and non collapsing. USG abdomen showed Congestive hepatopathy, mild spleenomegaly, bilateral grade 2 renal parenchymal changes. Patient was diagnosed to have Primary Tricuspid regurgitation in Atrial fibrillation due to infective endocarditis with right sided heart failure. Patient was treated with IV diuretics, MRA and anti coagulants and was clinically improved.

Conclusion: 85% of TR cases are secondary and Primary TR occurs only in 15% of patients due to the direct involvement of the tricuspid valve. This patient is a case of primary TR with infective endocarditis aetiology with no h/o IV drug abuse / immunocompromised state.

Keywords:

Tricuspid Regurgitation, Infective Endocarditis, Atrial Fibrillation, Heart Failure

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Meigs Syndrome (A Sheclothing)

Chinta Krishna Venu
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. D Anbarasu
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

Background and Aim: A 35 yr old, female previously disease free presented with complaints of Lower abdominal pain, abdominal distention and fatigue.

Methods: Confirmation was done through Radiological, histological and biomarker to support the diagnosis of meigs syndrome.

Discussion: Meigs syndrome is a triad of symptoms benign ovarian tumour, ascites and Right sided pleural effusion and it is a diagnosis of exclusion. The presentation of symptoms in a younger women is uncommon Because of reproductive age Pt underwent unilateral oophorectectomy. Ascites and pleural effusion resolved After surgery.

Conclusion: Awareness of benign lessons of ovary n younger women is important for Limited patients anxiety and direct appropriate treatment.

Keywords:

Ascites, Pleural Effusion, Ovarian Mass

A Rare Case of Organophosphate Induced Delayed Polyneu

Dr. Alishetty Vinay
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

Introduction:

- ORGANOPHOSPHATE INDUCED DELAYED POLYNEUROPATHY is very rare complication of OP poisoning.
- It occurs after 1-4 weeks of exposure
- Organo phosphate inhibits neuropathy target esterase activity and perturb the metabolism of important membrane phospholipids leading to axonopathy
- It is characterized by distal degeneration of some axons of both PNS and CNS
- Distal weakness and sensory loss which is progressive and severe
- NCS- mild sensory and severe axonal neuropathy/exclusively motor neuropathy
- There is no correlation between serum cholinesterase levels and development of OPIDP
- CSF – no pleocytosis

Case Report:

- 28-Year-old male residing in RANIPET came to medicine OPD with chief complaints of Cramping muscle pain in lower limbs for the past 5 days
- Tingling and numbness in bilateral lower limbs since 5 days
- Progressive weakness in bilateral lower limbs since 5 days
- Inability to walk for the past 2 days
- No h/o trauma, bowel and bladder involvement

Past History:

- History of consumption of 200 ml of 30% chlorpyrifos for which he was admitted for 15 days in outside hospital and got discharged
- No h/o any comorbidities
- Known alcoholic and tobacco chewer since 2 months
- No h/o similar complaints in the past

General examination:

- Patient was conscious, oriented
  bp – 110/70 mm hg
  Pulse-78/min
  Spo2-98% at room air
  No Pallor, Icterus, Edema, Cyanosis, Clubbing and Lymphadenopathy
  Systemic examination
  Cvs-s1, s2 present, no murmurs
  Rs-AEEBS and bilateral clear
  P/A–soft non tender
  CNS-conscious, oriented

Power:

	RIGHT	LEFT
UPPER LIMB	5/5	5/5
LOWER LIMB	0/5	0/5

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Plantar not elicited bilaterally
Bilateral foot drop present

- Pupils normal size reacting to light
- All DTR are present except ankle reflex
- Tone decreased in bilateral lower limbs
- No cranial nerve involvement
- Sensory system is normal
- Dorsal column is normal

Keywords:

Patients with mild cases recover over several months; those with more serious polyneuropathies have persistent effects. Recovery affects only sensory nerves, while motor neurons may permanently lose function. The prognosis for functional recovery depends on the degree of pyramidal involvement, with ataxia and paralysis representing a permanent outcome in severe cases

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The Hidden Enemey "A Case Study of Paraplegia Triggered by an Unusual Culprit"

Dr. Nayini Pavan Kumar
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

Introduction: Spinal Epidural Abscess • It is an infection within the epidural space anywhere in the spinal cord (medical emergency) • Presentation < 2 weeks • Incidence – 2 to 8 cases Per 10,000 • Mean Age – 57.2 yrs • M:F – 1.66:1.

Case Report: A 65 year old male Known Diabetic, Chronic alcholic Presented with difficulty in using lower limbs for 2 days initially he had difficulty in getting up from the chair, squatting position and difficulty in holding slippers lasted for 1 day the next day he noticed inability to move his both limbs. day • H/o pain in the upper back for 2 days • He had h/o dribbling of urine for the past 1 week.

Examination of CNS Higher mental functions – Normal. Cranial nerve examination – Normal Motor system: No muscle wasting, No involuntary movement • Toneand Power: Hypotonia and 0/5 @B/L Lowerlimb • Superficial And deep tendon reflexes (kneee, ankle): Absent Bilaterally.• Superficial sensation (Touch, pain, pressure): absent @B/L • Deep sensation (Presure, Vibrations, joint position sense) : Absent @bilaterally .Spine and cranium: Tenderness present in Dorsolumbar @ T8-T13 Region.

Keywords:

Early diagnosis and management of epidural abscess can can prevent permenant Paraplegia

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Unusual Presentation of Guillain-Barré Syndrome (GBS) in a Young Female Mimicking Stroke

Dr. Mohammed Noman Qureshi
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Dr. K. Nagarajan
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Dr. K. S. Sindhya
Shri Sathya Sai Medical College and Research Institute, Ammapettai, Kancheepuram, India

Abstract:

Introduction: Guillain-Barré syndrome (GBS) is assumed to be autoimmune and operated by a preceding infection, most often respiratory or gastrointestinal infections. Generally, infections by microorganisms such as Campylobacter jejuni, CMV, Mycoplasma pneumonia, or influenza virus exist several weeks prior to approximately two thirds of GBS cases. GBS has also been linked to other autoimmune diseases and malignancies such as systemic lupus erythematosus, and Hodgkin's lymphoma. Here we present a rare case of GBS presenting as hemiparesis mimicking a stroke.

Case report: A 38 yr old female patient came with complaints of Right sided weakness since 4 days. Progressive weakness that initially started as right side of the body weakness (hemiparesis). After 2 days weakness progressed into quadriplegia. With a clinical suspicion of stroke, the patient was first evaluated at a local hospital. A brain MRI including diffusion sequence was performed, but no specific findings were obtained Three days after admission, the patient developed right-side facial asymmetry. During the next two days, the facial asymmetry progressed into bilateral facial palsy and mild dysphagia. There was no history of diarrhea or respiratory infection prior to the onset of weakness. H/o vaccination for COVID19 2months back. Past history-No similar complaints in the past. No any other previous comorbidity

On Physical Examination-She was conscious well oriented to time place and person

Afebrile, pulse-80/min, BP-120/70 mmhg, RR-18/Min, Spo2-98% on room air

On Systemic Examination-CNS Examination- On Motor examination, hypotonia was present in all four extremities, with a power of 3/5 in both upper and lower extremities (proximally and distally). She had generalized areflexia with bilateral mute planter response. Other systemic examination was within normal.

Blood Test-CBC, KFT, LFT SR. ELECTROLYTES were WNL, HIV, HBsAg were negative

CSF analysis showed Albumino-cytological dissociation with 5 cells,118 mg/dl protein, and glucose of 82 mg/dl.

Nerve conduction studies were s/o Demyelinating Bilateral Motor Neuropathy.

A Brain MRI with diffusion sequence with Whole spine screening was performed, but no specific findings were obtained

Based on the Clinical, neurological examination, imaging findings, cerebrospinal fluid analysis, and nerve conduction studies, diagnosis of AMAN-Variant of GBS was made.

Treatment given- IVIG was administered as Five daily infusion for total dose of 2gm/kg body weight.

Conclusion: Although the usual presentation of GBS is progressive ascending weakness, clinical variations exist which may be challenging for diagnosis. The purpose of this case is to raise awareness of GBS clinical heterogeneity in order to promote early correct diagnosis of this clinical variety.

Keywords:

Case Report, Guillain-Barré Syndrome, Mimicking Stroke

A Myxomatous Embolic Shower: A Mimic of Blue Toe Syndrome

Dr. Krishna Priya A
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. Rajendran
Govt. Stanley Medical College and Hospital, Chennai, India

Dr. Mohammed Hassan Maricar
Govt. Stanley Medical College and Hospital, Chennai, India

Abstract:

Introduction: Atrial myxoma is the most common primary cardiac tumour and can present with vague constitutional symptoms, symptoms due to systemic embolization or intra-cardiac obstruction and are an uncommon cause of acute peripheral artery ischemia.

Case Report: A 32 year old female came with complaints of pain, burning sensation of bilateral lower limbs upto the ankle for past one day with similar episodes on and off for past three months. Examination was uneventful except for the bluish-black discoloration of left little toe and feeble pulse on left dorsalis pedis artery. Investigations revealed mild leucocytosis, elevated ESR& CRP. Lower limb Doppler was normal. On suspecting erythromelalgia NCS, serum cryoglobulin, autoimmune workup done and found normal. CT lower limb angiography showed splenic infarct, left renal infarct, thin attenuated flow in left anterior tibial (with collaterals), both posterior tibial and left dorsalis pedis artery. Lmwh and antiplatelets were initiated. Echocardiography done in view of new onset bradycardia revealed an echogenic mass in LA, EF:60%. Cardiac MRI showed f/s/o left atrial myxoma prolapsing into left ventricle through mitral valve during systole. Surgical excision of myxoma with pericardial patch closure of interatrial septum done and CAG normal. Hence this is a case of cardiac myxoma resulting in systemic embolization.

Conclusion: Cardiac myxomas should always be in differential diagnosis as a source of embolism in otherwise healthy patients presenting with systemic thromboembolism. Early diagnosis and prompt surgical resection is essential to prevent further embolization.

Keywords:

Limb Ischemia, Embolism, Cardiac Myxoma

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Journey through Complexity: Myelophthisic Anemia, Bony Lesions and Metastatic Signet Ring Cell

Dr. K. Ajith
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. Anbarasu. D
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. Jayannan. J
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

Background: A 56-year-old gentleman presented with a two-month history of bilateral hip pain, neck pain, and pain in both lower limbs, weight loss, fatigue, and generalized body aches. Patient was neither a smoker nor an alcoholic.

Clinical Findings: Upon examination, the patient was conscious, oriented, and afebrile with a blood pressure of 130/80 mm Hg and a pulse rate of 86/min. Systemic examination was normal. Significant clinical features included diffuse bony pain, significant weight loss, and easy fatigability.

Investigations: Laboratory results showed anemia (Hb: 7.7 g/dl), thrombocytopenia (platelets: 90,000), and leukocytosis (TC: 17,000). Reticulocyte count was 2.3%, LFT were normal, and alkaline phosphatase was elevated at 1690 IU/L. Tumor markers included a CEA of 5.9 (normal: 0-3.5) and PSA of 0.9 (normal: <4). Stool occult blood was negative. Peripheral smear showed leukoerythroblastic picture with occasional tear-drop cells and anisopoikilocytosis, without atypical cells or plasma cells. Imaging studies revealed mixed sclerotic and lytic lesions in the pelvis, spine, and ribs.

Diagnosis and Management: The clinical diagnosis was myelophthisic anemia with diffuse bony involvement, necessitating further investigation to rule out multiple myeloma or metastatic deposits. Bone marrow biopsy revealed signet ring cell carcinomatous metastatic deposits. Urine BJ protein was negative, serum protein electrophoresis showed no M-component, renal function tests were normal, and CT scans of the lung and abdomen showed no abnormalities. The patient was advised to undergo upper and lower gastrointestinal endoscopy.

Conclusion: The final diagnosis was myelophthisic anemia with diffuse sclerotic-lytic bony lesions and signet ring cell carcinomatous metastatic deposits in the bone marrow, suggesting cancer of unknown primary origin involving the bone and marrow. Immunohistochemistry and further gastrointestinal endoscopy are pending to identify the primary cancer site, with possible differentials including pancreatic, lung, prostate, kidney, or thyroid cancer.

Keywords:

Myelophthisic Anemia, Bony Pain, Sclerotic-Lytic Lesions, Signet Ring Cell Carcinoma, Carcinoma of Unknown Primary (CUP), Bone Marrow Metastasis

An Interesting Case of Acute Ischemic Stroke Secondary to Native Valve-Infective Endocarditis

Dr. Shebaz MS
Tagore Medical College and Hospital, Chennai, India

Dr. Selvamai
Tagore Medical College and Hospital, Chennai, India

Abstract:

Background: Patients with end-stage renal disease receiving hemodialysis(HD) are at high risk of ischemic stroke. Approximately 2% to 6% of patients with chronic kidney disease (CKD) on HD develop Infective Endocarditis.

Case report: A 44-year-old male with chronic kidney disease on twice-weekly maintenance hemodialysis presented with high-grade intermittent fever, chills, rigors, and drowsiness for one day. Examination revealed GCS- E2V5M6, pallor, fever, tachycardia, and hypertension. He had a right-sided permacath. No abnormality detected on auscultation. Plantar-B/L flexor response and no meningeal signs. Lab results revealed total leukocyte count- 23,800/dL (82% neutrophils), Hb- 4.0 g/dL, MCV 55.7 fL, MCHC- 31.1 g/dL, platelets- 112,000/dL, RBS- 363 mg/dL, blood urea- 116 mg/dL, and S. creatinine 3.8 mg/dL. CT brain revealed acute infarcts in the left frontoparietal and temporo-occipital lobes, and right centrum semiovale. ECG showed sinus tachycardia. HRCT chest revealed fibrosis, traction bronchiectasis, and consolidatory changes, suggesting possible tuberculosis (TB). He was diagnosed with posterior circulation stroke, and suspected to have pulmonary TB with TB vasculitis, and severe sepsis. He was treated with meropenem, antihypertensives, antiedema measures, hemodialysis, and blood transfusions. On day 12, pansystolic murmur was heard in the mitral area radiating to left axilla, along with Osler's nodes, Janeway lesions, and Roth spots. Ultrasound revealed multiple splenic abscesses. Echocardiography showed a 1.3 x 1.9 cm mobile mass on the posterior mitral leaflet with moderate mitral regurgitation. Blood cultures identified Staphylococcus aureus sensitive to vancomycin, linezolid, and teicoplanin.

Conclusion: Staphylococcal species often gain access to the bloodstream via infected central venous catheters, arteriovenous (AV) grafts, or AV fistulae. Patients with end-stage renal disease develop calcific valve degeneration, which favours bacterial colonization and is often challenging to detect via echocardiography. Administration of antibiotics alone is ineffective in treating catheter-related bloodstream infections in HD, requiring catheter or graft removal. Effective prevention relies on early AV fistula placement and following sterile technique with access catheter manipulation.

Keywords:

Arteriovenous Graft, Infective Endocarditis, Methicillin-Resistant Staphylococcus Aureus, Stroke, Valvular Heart Disease

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Prevalence of Cardiometabolic Risk Factors Among College Students of Southern India: A Cross-Sectional Observational Study

Prathmesh Deolekar
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

Background: Cardiometabolic risk factors, such as obesity, hypertension, dyslipidemia, and insulin resistance, are becoming increasingly prevalent among young adults, including college students. This demographic is particularly vulnerable due to lifestyle changes and stress associated with academic pressures.

Objective: This study aims to determine the prevalence of cardiometabolic risk factors among college students and explore the associations with lifestyle behaviours and demographic characteristics.

Methods: A cross-sectional study was conducted with a sample of 500 college students aged 20-27 years from multiple universities. Data collection involved anthropometric measurements, blood pressure assessments, blood tests for glucose and lipid profiles, and a detailed questionnaire on dietary habits, physical activity, alcohol and tobacco use, and socioeconomic background. Data analyzed using descriptive statistics and logistic regression to identify significant predictors and to assess the prevalence and correlations between cardiometabolic risk factors and lifestyle behaviours.

Results: The study revealed a significant prevalence of cardiometabolic risk factors among college students. Obesity was identified in 41% of the participants, while 17% had hypertension. Elevated fasting blood glucose levels were found in 10 % of the cohort, and dyslipidaemia was present in 20%. Insulin resistance was detected in12 % of the students. Poor dietary habits, lack of physical activity, high alcohol consumption, and smoking were significantly correlated with the presence of multiple cardiometabolic risk factors. Male students exhibited higher prevalence rates compared to female students.

Conclusion: The high prevalence of cardiometabolic risk factors among college students underscores the need for comprehensive health promotion strategies within the university setting. Interventions focusing on improving dietary habits, increasing physical activity, and reducing harmful behaviours like smoking and excessive alcohol consumption are crucial to mitigating long-term health risks.

Keywords:

Cardiometabolic Risk Factors, College Students, Obesity, Hypertension, Dyslipidaemia, Lifestyle Behaviours

Unveiling the Uncommon- ANCA Vasculitis with Renal Failure- Not Always RPGN

Dr. Suganya Devi
Government Kilpauk Medical College, Chennai, India

Dr. Malathi
Government Royapettah Hospital, Chennai, India

Dr. Revathi
Government Kilpauk Medical College, Chennai, India

Abstract:

Introduction: ANCA (Anti-Neutrophil Cytoplasmic Antibody)-associated vasculitis is a group of disorders characterized by inflammation of blood vessels and often presents with pulmonary and renal involvement. The classic renal manifestation is pauci-immune necrotizing glomerulonephritis, frequently presenting as rapidly progressive glomerulonephritis (RPGN). However, ANCA-associated vasculitis can occasionally present with less typical renal manifestations, such as acute interstitial nephritis, which is a rare variant.

Aims and Objectives:

1. To present a case of ANCA-associated vasculitis with a rare renal manifestation of acute interstitial nephritis.
2. To highlight the diagnostic challenges and the importance of considering atypical presentations in ANCA-associated vasculitis.
3. To discuss the treatment approach and outcome for a patient with this rare presentation.

Methods:

- Patient Presentation: Detailed clinical history and symptomatology were recorded, including onset and progression of symptoms.
- Laboratory Investigations: Comprehensive blood tests, including complete blood count, renal function tests, and CRP levels.
- Imaging Studies: CT scan of the thorax to identify pulmonary changes.
- Microbiological Evaluation: Cultures and other diagnostic tests to rule out infectious causes.
- Autoimmune Panel:Testing for p-ANCA and anti-MPO antibodies using ELISA.
- Renal Biopsy:To assess for glomerular pathology and distinguish between various types of renal involvement.
- Treatment and Follow-up:Initiation of corticosteroids and cyclophosphamide, followed by monitoring of clinical response and renal function.

Results:

- The patient exhibited symptoms consistent with pulmonary involvement and renal dysfunction. Initial imaging revealed bilateral ground-glass opacities and patchy consolidation.
- Laboratory results showed severe anemia, elevated CRP, and abnormal renal parameters.
- Autoimmune testing was positive for p-ANCA and confirmed anti-MPO positivity.
- Renal biopsy results were atypical for ANCA-associated vasculitis, revealing acute interstitial nephritis without evidence of small vessel vasculitis.
- The patient was treated with steroids and cyclophosphamide. Subsequent follow-ups demonstrated significant improvement in symptoms, resolution of pulmonary parenchymal changes on CT, and improvement in renal function.

Summary: This case illustrates an unusual presentation of ANCA-associated vasculitis with acute interstitial nephritis rather than the more common RPGN. It emphasizes the necessity of considering diverse manifestations of ANCA-associated vasculitis for accurate diagnosis and treatment. The patient's response to steroid and cyclophosphamide therapy and the resolution of symptoms highlight the effectiveness of treatment for this atypical presentation.

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Conclusion: We hereby see an extremely rare case of ANCA related vasculitis presenting as interstitial nephritis. The patient was started on treatment with steroids and cyclophosphamide. There was relief of symptoms and repeat CT Thorax showed resolution of parenchymal changes. Renal function was also found to-be improving on last follow-up.

Keywords:

P-ANCA Positivity, Anti-MPO, Acute Interstitial Nephritis, Steroids and Cyclophosphamide

A Tensive Twist: Case Series on Hypertension from the OPD

Dr. M. B. Pratyusha
Madras Medical College, Chennai, India

Dr. A. Samueldinesh
Madras Medical College, Chennai, India

Abstract:

Case 1: CASE 1: 50 year old man, no prior comorbids presented with headache and giddiness. BP on presentation-150/100. Examination revealed orthostatic hypotension. Labs revealed Ur-136, Creat-1.9. Abdominal imaging revealed medical renal disease with bilateral suprarenal mass. ARR was normal, plasma and 24-hour-urinary metanephrines were borderline high. We proceeded for biopsy and HPE s/o Phaeochromocytoma. Ga-68-DOTANOC scan was consistent with diagnosis and b/l adrenalectomy was done after which patient improved.

Case 2: 23-year old girl presented with giddiness for 2 months. Her BP in OPD was 180/90 in R UL, 150/90 in R UL. Exam revealed bruit in R subclavian artery. S.Urea was 36 and Creat-1.1, urine-Albumin 1+. CRP was 98. Usg abd revealed contracted L kidney and renal artery doppler low resistance parvus waveforms on L intrarenal arteries. CT angiogram of abdomen and UL was done s/o aotoarteritis. ANA was negative. Diagnosis of Takayasu arteritis was made and patient started on immunosuppressive therapy and continued on antihypertensives.

Case 3: 14 year boy presented to OP with headache, vomiting and blurring of vision for 5 days. He had fever 2 days back. BP- 160/90. Fundus exam revealed papilledema. CBC revealed thrombocytopenia. Dengue-IgM was positive. CT Brain and MRI findings was s/o PRES. Patient improved with supportive management and was discharged after recovery.

Case 4: 70 year female hypertensive for 3 months, poorly controlled with Rx, was bought by attenders with c/o fatigue and decreased responsiveness for 1 week. BP- 170/100 with postural drop. Labs revealed Urea-56, creat-1.6, Na-115, urine r/e-trace albumin. S.osmolality was low and U.osmolality normal. Usg-abd and renal artery doppler s/o Left-RAS confirmed by CT-Renal-angio. Diagnosis of Hyponatremia-hypertensive syndrome was made. Patient improved on treatment with 3%nacl and antihypertensives.

Keywords:

Hypertension, OPD

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Prothrombin Time-International Normalized Ratio to Albumin Ratio based Prediction of the Onset of Hepatorenal Syndrome in Individuals with Alcoholic Liver Cirrhosis – A Cross Sectional Study

Dr. Thejdeep Mahamkali
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Dr. C Arul Murugan
Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Salem, India

Abstract:

Background: Hepato-Renal Syndrome (HRS) is a serious and preventable consequence of advanced liver cirrhosis that has a strikingly high mortality rate. Monitoring Prothrombin Time-International Normalized Ratio to Albumin Ratio (PTAR score) in patients admitted with alcoholic liver cirrhosis will help the physicians to identify those who are at risk of developing HRS. Consequently, this facilitates the prompt diagnosis and application of appropriate therapeutic and preventive approaches.

Objective: To assess and compare the PTAR score in patients of alcoholic liver cirrhosis with and without hepatorenal syndrome.

Methodology: An Analytical Cross- Sectional study was conducted among patients of alcoholic liver cirrhosis admitted in a tertiary care hospital during the period of February to April 2024. Considering p1 (85.4%), p2 (45.2%), power 80% and alpha error 5% the sample size was calculated as 26 in each group (Total 52) using comparison of two proportion formula. Participants were recruited based on convenient sampling those who fulfil the eligibility criteria. Data collected in validated semi-structured questionnaire and entered in MS excel. Chi-square test was applied to find the statistical difference using IBM SPSS 16.0 software.

Results: The mean age of 52 participants were 42.3 ± 8.56. All the participants were male with mean duration of alcohol consumption of 14.4 ± 3.06. Among 26 participants with HRS 79% were in high risk based on PTAR score and of 26 participants without HRS 31% were in high risk. The mean PT/INR ratio was higher in HRS group when compared with non-HRS group. These differences were found to be statistically significant.

Conclusion: The risk of Hepato-Renal Syndrome among alcoholic liver cirrhosis patients is increased with high-risk group in PTAR score. So the critical monitoring of PTAR score helps in preventing the HRS among alcoholic liver cirrhosis patients and thus increases the survival rate.

Keywords:

Hepato-Renal Syndrome, Alcoholic Liver Cirrhosis, PT/INR ratio

An Insight into Cardiac Manifestations in Thyroid Dysfunction

Dr. P. Yashwanth Krishna Sai JR
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. Arthi
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Dr. Syed
Meenakshi Medical College Hospital and Research Institute, Kanchipuram, India

Abstract:

ntroduction: Thyroid hormones are vital for the normal functioning of heart. Cardiovascular manifestations are frequent findings in both hypothyroidism and hyperthyroidism. Hyperthyroidism leads to mortality from increased incidence of dysrhythmias and embolic stroke due to atrial fibrillation (AF).

Objectives: To study cardiac manifestations in Thyroid dysfunction patients.

Methods: Study Design - Record based, retrospective, descriptive study was carried out at a tertiary care centre. 60 cases of thyroid dysfunction attending General Medicine OPD between November 2023 and JUNE 2024 were restrospectively studied.

Result: In this study, 60 patients of thyroid dysfunction out of which 26 patients had hyperthyroidism and 34 had hypothyroidism. Age of the patients ranged from 21-68 years. Among hyperthyroid patients females were more than males, most common cardiovascular symptom was palpitations 69.2% and sign is tachycardia 61.5% Sinus tachycardia is found in 42.3% patients. Among hypothyroidism patients commonest cardiovascular symptom was dyspnoea 38.2%, Bradycardia present in 35.2%, Sinus Bradycardia seen in 32.3%.

Conclusion: Thyroid dysfunction both overt and subclinical hyper/hypothyroidism is common in Females.Cardiovascular manifestations are common and majority are asymptomatic. Both subclinical hyper/hypothyroidism are associated with cardiovascular morbidity and mortality especially in elderly patients due to atrial fibrillation and atherosclerosis. Therefore, Cardiac evaluation must be done in all patients of thyroid dysfunction.

Keywords:

Thyroid Dysfunction, Cardiovascular Manifestations

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Solving the Unresolved Pulmonary Puzzle

Dr. A.P.Thiyagarajan
Omandurar Government Medical College, Chennai, India

Dr. Ramesh
Omandurar Government Medical College, Chennai, India

Abstract:

Introduction: Wegener granulomatosis - renamed as granulomatosis with polyangiitis is a small-medium vessel necrotizing vasculitis, which is a component of a vast spectrum of disorders entitled the anti-neutrophil-cytoplasmic-antibody (ANCA) associated vasculitides (AAV). Granulomatosis with polyangiitis (GPA) is a rare vasculitis affecting small vessels. Hallmark features include necrotizing granulomas and pauci-immune vasculitis that most commonly affects the upper respiratory tract, lungs, and kidneys. Incidence 3:100,000 with 1:1 male to female ratio, Mean age of onset 40 years.

Case Report: A case of 32 years old male with no known co-morbidities, presenting with 3month history of Low grade intermittent fever and breathlessness with cough associated with mucopurulent expectoration and minimal hemoptysis. history of progressive hearing loss for past 3 months. He developed bilateral ankle pain with rashes involving both legs.

Investigations:

CT CHEST (With Contrast)- Multiple well defined cavitary soft tissue lesions scattered in the apical segments of both upper lobes, lateral segment of right middle lobe and medial segment of left lower lobe. Possibility of infective etiology.
PLEURAL FLUID ANALYSIS-exudative, negative for PTB,no atypical cells
Sputum c/s-klebsiella pneumonia positive,BAL-negative
ANA, c-ANCA POSITIVE.
AUDIOMETRY- B/L sensoneuronal hearing loss
Skin biopsy -cutaneous leucocytoclastic vasculitis

Treatment:

- INJ.MEROPENAM 1g iv TDS for 14days
- INJ.METHYLPREDNISOLONE 1g pulse therapy for 3 days followed by Prednisolone 60mg/day
- Rituximab 375mg/m2/week for 4 weeks
- Advised Pneumococcal and INFLUENZA vaccination

Conclusion: Hearing loss is one of the rare presentation of GPA . Complete resolution of cavitation occurred in 1 year of treatment initiation. As seen in the cases profiled here, cavitary lung disease in GPA can present with cough, hemoptysis, dyspnea, pleuritic chest pain or even no symptoms. The development of a new cavity should prompt a careful assessment for active disease in other organ sites. Even when this is found, however, evaluation should be performed to rule out infection prior to aggressive immunosuppression. If no infection is found and the patient is treated for GPA, cavities must be monitored radiographically to confirm that they respond to therapy. A cavity that worsens with immunosuppression should heighten concern for a superimposed process.

Keywords:

Pulmonary Puzzle, Wegener Granulomatosis, Anti-Neutrophil-Cytoplasmic-Antibody (ANCA), Associated Vasculitides (AAV), Granulomatosis with Polyangiitis (GPA)

Clinically Amyopathic Dermatomyositis with Sjogren's Syndrome– A Rare Phenomenon

Dr. Smrithi S
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Dr. Ramakrishnan S R
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Abstract:

Introduction: Dermatomyositis is an idiopathic inflammatory myopathy that most commonly presents with muscle weakness and characteristic cutaneous findings like Gottron's papules.

Case report: Our case is a 61-year-old female with hyper pigmented lesions and ulcers over multiple areas of the body for 3 months with history of weight loss and no muscle weakness. Myositis Panel was positive for MDA5 ++ and antibody to R0-52+ LIA 23 was borderline positive for histones and RO-52. Schirmer's test was positive. Due to high incidence of malignancies, AFP, CA 125, CA 19-9 and Pap smear were done and found to be negative. Patient was started on steroids and showed improvement.

Conclusion: A subset of patients develop skin findings of dermatomyositis in the absence of muscle symptoms. Patients with CADM can develop extra articular manifestations, especially when associated with MDA5 antibody.

Keywords:

Dermatomyositis, Skin Lesions

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Pericardial Effusion in Hashimotos Thyroidits

Dr. Isabella Rita M
Sree Balaji Medical College and Hospital, Chennai, India

Dr. Anandan
Sree Balaji Medical College and Hospital, Chennai, India

Dr. Saketh Ramineni
Sree Balaji Medical College and Hospital, Chennai, India

Abstract:

Hashimoto's thyroiditis (HT), an autoimmune disorder characterized by chronic lymphocytic infiltration of the thyroid gland, is a prevalent cause of hypothyroidism. While HT primarily manifests as thyroid dysfunction, it can also lead to various systemic complications. One such rare but significant complication is pericardial effusion, the accumulation of fluid in the pericardial cavity. This abstract explores the clinical presentation, diagnostic approach, and management of pericardial effusion secondary to HT. We present a case of a middle-aged female with a known history of HT, who developed progressive dyspnea and chest discomfort. Diagnostic imaging, including echocardiography, confirmed the presence of a substantial pericardial effusion. Thyroid function tests revealed profound hypothyroidism. The patient was managed with levothyroxine replacement therapy, leading to the resolution of pericardial effusion. This case underscores the importance of considering HT in the differential diagnosis of pericardial effusion and highlights the need for timely thyroid function assessment and appropriate management to prevent potentially life-threatening complications.

Keywords:

Hashimoto's Thyroiditis (HT), Autoimmune Disorder, Thyroid Gland

An Interesting Case of Purpura in Adults

Dr. K. Adhityan
Omandurar Government Medical College, Chennai, India

Dr. M. Sharmila
Omandurar Government Medical College, Chennai, India

Abstract:

Introduction: Henoch-Schönlein Purpura (HSP) is the most common vasculitis in children and less common in adults, characterized by immune complex mediated small vessel vasculitis.

Aim and Objective: To review the clinical features, diagnosis, management, and outcomes of IgA vasculitis specifically in adult populations.

Methodology: Case Report: A 30-year-old female presented with hematuria, facial puffiness, pedal edema, hemoptysis along with palpable purpura over lower limbs, history of low-grade fever one month ago.
O/E: Mild pallor, Grade 2 pitting pedal edema; Vitals: Stable except BP-130/80mmhg

Local Examination: Erythematous, Non blanchable, Palpable purpuric papules/plaques noted over LL>>UL

Other System: normal

Investigation:
CBC: leucocytosis/anemia; Peripheral Smear: normocytic normochromic anemia
Altered renal parameters, Hypoproteinemia, Hypoalbunemia
CRP/ESR/LDH: Elevated
SOBT–positive
Urine Examination:
Hematuria with 3+/ nephrotic range proteinuria
Hypocomplementemia
ASO TITER – 200 IU / ML [POSITIVE]
ANA/ANCA Profile/RA Factor/Viral Marker/Cryoglobulins – negative
USG Abdomen Pelvis:
B/L kidney appear bulky with increased cortical echoes
SKIN BIOPSY: leucocytoclastic vasculitis

Renal Biopsy:
Light Microscopy:
Endocapillary and mesangial hypercellularity in all glomeruli.
Cellular crescent formation seen.
Immunofluorescence study: Ig A, Ig G, C3 are positive on mesangium

Impression: Crescentric Glomerulonephritis-Immune complex mediated

Diagnosis: Adult onset IgA Vasculitis

Treatment:
INJ. METHYLPREDNISOLONE:500mg/day for 3 days, other supportive measures.
INJECTION CYCLOPHOSPHAMIDE 500 MG IV infusion at WEEK 0,2, 4,7,10,13,16,19,21,24.
ACE Inhibitors.

Conclusion: Although less common than in children, IgA vasculitis should be considered in the differential diagnosis of adults presenting with purpura and systemic symptoms. Nephrotic range Proteinuria, Elevated serum creatinine, hypertension are

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mostly seen in adults and rarely in children. In atypical presentations like adults, skin biopsy plays an important role for diagnosis. Renal Biopsy is for prognostic purpose and severity. In Adults, always watch for ESRD Progressions.

Keywords:

IgA vasculitis in Adults, Henoch-Schönlein Purpura, Systemic vasculitis, Renal involvement

Compound C10H15N Abuse & Its Effects on Right Heart

Dr. K. Jayanthmurali
Sree Balaji Medical College and Hospital, Chennai, India

Dr. N. Anuradha
Sree Balaji Medical College and Hospital, Chennai, India

Dr. Anandh Mohan
Sree Balaji Medical College and Hospital, Chennai, India

Abstract:

Compound C10H15N is known as Methamphetamine which is a CNS stimulant used as recreational drug in club parties. Infective endocarditis is a heterogenous syndrome characterized by infection of endocardium, primarily heart valves, and cardiovascular devices. Right sided endocarditis constitutes 5-10% of all IE cases. IE presenting as an abscess on the right sided native valve is extremely rare in a healthy individual.This abstract explores the clinical presentation, diagnostic approach, and management of Right sided infective endocarditis involving tricuspid valve, we present a case of middle aged man with complaints of fever with chills for 1 week, associated with palpitations, dry cough and breathlessness of grade 4 NYHA, for 2days.he is an iv drug abuser using methamphentamine,2D ECHO shows Freely mobile mass of size 21*12mm with hyper-echoic border and hypo-echoic centre, attached to the septal leaflet of tricuspid valve in the atrial side.3 out of 4 blood cultures are positive for coagulase negative staphylococcus aureus. Transthoracicechocardiography was positive,and treated with inj.vancomycin and gentamycin ,Complete resolution of clinical IE syndrome was achieved after 6 wks of iv antibiotics, This case emphasises the importance of Careful assessment of history of intravenous drug abuse in young patient with fever of unknown origin.Early diagnosis and appropriate medical therapy avoids the development of complications necessitating surgery, apart from host and virulence factors.Addressing the underlying drug abuse issue , by giving support for drug cessation, should be given high priority.

Keywords:

Compound C10H15N, Right Heart, CNS Stimulant

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A Case Report of Young Diabetes

Dr. Konkala Lavanya
Madras Medical College, Chennai, India

Dr. T. S. Santhi
Madras Medical College, Chennai, India

Dr. R. Balaji
Madras Medical College, Chennai, India

Abstract:

Mr. K , 26 years male patient; short statured, known case of diabetes since 2 months on insulin ; presented with complaints of giddiness on standing , sweating on abd off since 1 month ,difficulty in heavy holding with both hands and slippage of heavy object, difficulty in mixing food , difficulty in getting up from squatting , difficulty in climbing stairs, history of buckling of knees since 2 months , bilateral shoulder pain attributing causing restriction of shoulder movements in all ranges since 3 months, difficulty in passing urine since 3 months, h/o numbness of bilateral lower limbs and decreased perception of hot and cold sensations, decreased pain perceptions since 6 months , history of blurring of vision since 1 year. On examination, power ranging from 4- to 4+ in bilateral upper limb and lower limbs, decreased vibration, touch and pain sensations over bilateral lower limbs, orthostatic tachycardia and hypotension present. On labaratory examination, patient had hb -8.2 gm/dl, wbc -5600, platelets -316k, ur/cr - 23/1.1, urine PCR -1.8,24 urinary protein -418 mg/day, RBS -598.1, FBS- 194, cholesterol/ TGL/HDL -201/192/28, Na/k -135/1.9, 24 hour urine k+ -14.4, ck/ckmb - 4313/46, abg analysis - pH - 7.4, hco3- -24, anti islet, anti insulin, anti GAD, anti IA2 Antibodies - negative. Echocardiogram showed mild LVSD -45%, ophthalmological examination revealed bilateral proliferative diabetic retinopathy. On correcting hypokalemia, patient weakness improved. On genetic analysis revealed, KCNJ 11 exon 1, c.10949>A, p.Arg365His , heterozygous , autosomal dominant mutation of uncertain significance. Patient got diagnosed as MATURITY ONSET DIABETES OF THE YOUNG; TYPE 13 (very rare type), with diabetic retinopathy, diabetic nephropathy, diabetic neuropathy, hypokalemia induced rhabdomyolysis (which is corrected). Glycemic control achieved with sulfonyl urea and insulin.

Conclusion: Around 2-5% of young diabetes was caused by MODY. Early detection of diabetes can prevent complications. Detection of specific cause can help to achieve glycemic control.

Keywords:

Young Diabetes

Target Trial Emulation Comparing Efficacy of Early OHAs to Standard Practice of Short-acting Insulin in Urosepsis Cases in ICU

Dr. Noel Sam Thomas
Saveetha Medlical College and Hospital, Chennai, India

Dr. Jagadeesan M.
Saveetha Medlical College and Hospital, Chennai, India

Abstract:

Introduction: Patients suffering from T2DM often develop urinary tract infections. The pathophysiology involved in this correlation is multi-fold. Most such infections are self-limiting and do not require active management. However a proportion of cases go on to develop complicated UTIs, also known as urosepsis, which could become a medical emergency requiring aggressive management. Standard practice of addressing glycaemic control in an ICU setting is to use short-acting insulins.

Objectives: This study is a target trial emulation that aims to test the hypothesis that equivalent or superior glycaemic control can be obtained for patients with urosepsis requiring ICU admission using OHAs instead of short-acting Insulin.

Method of Study: A cohort of 60 patients is selected based on non-probability convenience sampling and pre-determined inclusion and selection criteria, and randomly assigned to either the Group A or Group B. Patients in Group A are treated with clinically appropriate OHAs; drugs and dosages are titrated as per individual response. Patients belonging to Group B are treated with short-acting insulins following standard guidelines to achieve and maintain euglycemia. Both the groups are treated with standard broad-spectrum antibiotics as per current clinical practices and switched to specific therapy based on drug sensitivity reports from urine cultures. Time to euglycemia (with an upper limit of 72h) is taken as the primary outcome and time to recovery (with an upper limit of 7 days), as identified by resolution of clinical symptoms and normalisation of blood parameters (CRP, CBC and TLC counts) is taken as secondary outcome.

Results: Both the primary and secondary endpoints were shorter in the group administered short-acting insulin compared to the group treated with OHAs.

Conclusion: For patients admitted with septic foci, such as urosepsis, in the ICU, the glycaemic control as well as recovery outcomes obtained using short-acting insulin appears to be superior to the use of OHAs.

Keywords:

Urosepsis, Urinary Tract Infection (UTI), Intensive Care Unit (ICU), Diabetic, Diabetes mellitus, T2DM, Insulin

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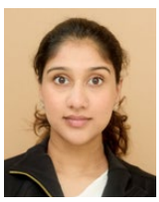


Impact of Gut Microbiota Modulation on Diabetes in Adults: A Systematic Review

Dr. Sarmini Varatharajan
Saveetha Medlical College and Hospital, Chennai, India

Abstract:

Type 2 diabetes mellitus is a progressive metabolic disorder characterized by pancreatic □-cell dysfunction and peripheral insulin resistance, leading to impaired glucose metabolism. Emerging evidence suggests that gut microbiota dysbiosis, an imbalance in the gut microbial community, is associated with the severity of T2DM. This systematic review explores the relationship between gut microbiota and T2DM, and evaluates the potential of microbiota modulation therapies such as probiotics, prebiotics, and fecal microbial transplantation.

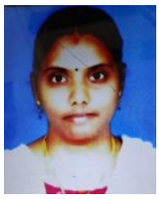
Methodology involved a comprehensive search of PubMed up to January 2024, focusing on studies related to gut microbiota and diabetes. Twenty-five studies met the inclusion criteria, which involved adults with T2DM and interventions targeting gut microbiota. Data extraction included study design, sample size, participant demographics, intervention details, and outcomes related to glycemic control, insulin sensitivity, and resistance.

Findings indicate that T2DM patients exhibit increased levels of pathogenic bacteria like Escherichia coli and decreased levels of butyrate-producing taxa, which are crucial for insulin processing. Low gut microbial diversity was noted in prediabetes and new diabetes patients compared to healthy controls. Higher abundance of Lactobacillus species and lower abundance of Clostridium species were observed in T2DM patients. Specific bacteria, such as Coprococcus and Flavonifractor, were linked to insulin sensitivity and resistance, respectively.

The review confirms the association between gut microbiota dysbiosis and T2DM, highlighting the potential of microbiota modulation in improving glycemic control. Despite variations in study protocols, the evidence supports the promise of specific bacteria like Coprococcus and butyrate-producing bacteria in enhancing insulin sensitivity. Future research should focus on understanding gut microbiota mechanisms and standardizing interventions for effective diabetes management.

Keywords:

Type 2 Diabetes Mellitus, Gut Microbiota, Dysbiosis, Probiotics, Insulin Sensitivity



Ventricular Tachycardia - A Case Series with Belhassen VT - A Rare Presentation

Dr. N. Sughanya Shree
Tagore Medical College and Hospital, Chennai, India

Dr. Nasreen
Tagore Medical College and Hospital, Chennai, India

Abstract:

Introduction: Ventricular tachycardia is an uncommon, but life threatening condition. Here we describe the incidence, causes and management of VT among patients admitted to coronary care unit in tertiary care hospital.

Material and Methods: Between 1 November 2023 and 29 February 2024, 42 patients were admitted to the coronary care unit and 6 presented with VT. A retrospective review of their records was conducted.

Results: All had abnormal left ventricular ejection fraction, median of 30%. Acute myocardial infarction (4 patients) was the most common trigger, followed by decompensated heart failure (1), systemic inflammatory response syndrome on a background of non-ischemic dilated cardiomyopathy (1) and bradycardia-induced polymorphic VT (1). Three patients had polymorphic VT and the rest had monomorphic VT. A Rare Preaenation of Belhassen VT was seen...Intravenous amiodarone, lignocaine, overdrive pacing were useful in arrhythmia control.

Conclusion: Acute myocardial infarction was the main trigger of VT in our patients. Intravenous amiodarone, lignocaine, overdrive pacing and intra-aortic balloon pump counterpulsation will be useful in supportive management.

Keywords:

Ventricular Tachycardia, Belhassen VT

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Correlation of Tg/HDL Ratio and Liver Fibrosis in People with Diabetes in a Tertiary Care Center in India

Pulkit Mehrotra
Sri Ramachandra Institute of Higher Education and Research, Chennai, India

Abstract:

Introduction: As per the recent International Diabetes Federation (IDF) atlas, there are 537million adults living with diabetes.

Indians for the same Body Mass Index (BMI) have higher central adiposity and insulin resistance as compared to Caucasians. High insulin resistance in people with diabetes predisposes to Non-Alcoholic Fatty Liver Disease(NAFLD).TG/ HDL ratio is emerging as a sensitive marker of insulin resistance.

Use of ultrasonography for the diagnosis of NAFLD has been debated in various studies.

Fibro scan is a more sensitive modality for diagnosis of liver fibrosis and scarring. Liver stiffness measurements predict advanced fibrosis in people with diabetes

The current study aims to correlate TG/HDL ratio and liver stiffness measurements done using fibro scan in people with diabetes.

Material and Methods: A total of 181 people with diabetes coming for the first time at our centre underwent liver stiffness measurements using fibro scan after taking consent, people on prior lipid-lowering therapy and thiazolidinedione therapy were excluded from the study.

Demographic data, such as age, duration of diabetes, and BMI, were recorded. Current Hba1c and lipid profiles were done and TG/HDL ratios were calculated.

Results: Out of the total of 181 subjects 51% were males and 49% were females, mean age was 50.2 years, duration of diabetes was 7.6years, Hba1c values ranged from 6.0%-15% (mean 8.5%), median stiffness ranged from 2.3kpa to 34.8kpa (median of 8.0kpa), TG/ HDL ratio values ranged from 0.5-29.3(median of 4.5).

Median stiffness, correlated with TG/ HDL ratio correlation coefficient, was 0.211 (p 0.01)

Further 26.5% subjects had advanced fibrosis (Liver stiffness measurement (LSM) >9.1), 23.7%of male subjects and 30% of female subjects had advanced fibrosis. Males and females with LSM >9.1 had high TG/ HDL ratio, mean 4.9 in males (range 2.5-13.7) and 4.9 in females (range 1.0-17). These values were much higher than TG/HDL values of 0.9 and 1.2 used in females and males respectively, as cutoffs to predict insulin resistance.

Discussion: Numerous studies have shown insulin resistance as a predictor of diabetic complications.TG/ HDL ratio is a sensitive indicator of insulin resistance. Previous studies have correlated TG/HDL ratio with NAFLD in nondiabetic individuals. Ultrasonography was used in these studies to diagnose NAFLD. Fibro scan is a more sensitive and specific modality to screen for NAFLD. Median stiffness predicts liver fibrosis.

There is a high incidence of advanced fibrosis in the index study, which correlated with TG/HDL ratio. All male and female subjects with advanced fibrosis had a high TG/HDL ratio much beyond the cutoffs in previous studies.

To our knowledge, this is the first study to correlate TG /HDL ratio, a marker of insulin resistance with liver stiffness measurements in people with type 2 diabetes.

Keywords:

Tg/HDL Ratio, Liver Fibrosis, Diabetes, Tertiary Care Center