

## Abstracts - Oral Papers

### A Study on Correlation Between Serum Uric Acid Levels and Target Organ Damage In Hypertensive Patients

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Chettinad Health City Medical Journal 2017; 6(2): 80

#### Abstract

**Introduction:** Studies show that serum uric acid (SUA) plays a role in cardiovascular morbidity in general population as well in hypertensives, type2DM and cardiac or vascular diseases. Independent role of SUA as a risk factor is debate for decades. Pathophysiological mechanisms are cardiovascular damage at cellular and tissue level by proliferation of vascular smooth cells, stimulation of inflammatory pathway and possibly by platelet activation. SUA proved to be a better marker also for endothelial dysfunction.

**Aims and Objectives:** To evaluate the correlation between SUA and the presence of preclinical target organ damage in hypertensive population.

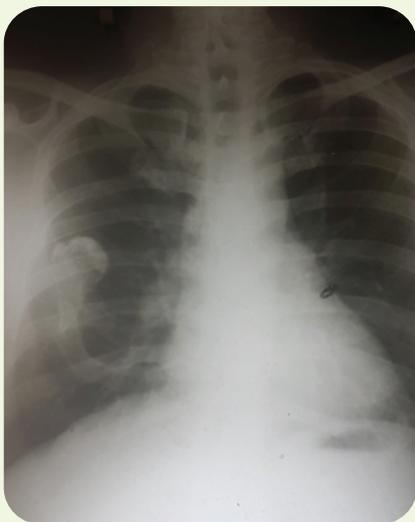
**Materials and Methods:** The study was conducted in 100 patients attending medicine outpatient department as a cross sectional study. Target organ damage was assessed by microalbuminuria (30-300mcg/mg creatinine) and fundus examination. Hyperuricemia was defined as SUA>7mg/dl in males and >6mg/dl in females. Statistical analysis was done using chi-square and two sample T test and data analysed by SPSS software.

**Results:** Microalbuminuria correlated significantly with serum uric acid level (p value <0.01) but retinopathy did not correlate significantly with serum uric acid (p=0.217)

**Conclusion:** Serum uric acid levels are related to target organ damage in hypertensive patients. Further studies are needed regarding benefit of uric acid lowering therapy in hypertension.

**Key Words:** Uric acid, Hypertension, Microalbuminuria

#### Image Challenge - 4



Clue: Patient came for a routine pre-employment check up

- Answer in page : 95

## Study of Oral Glucose Tolerance Test in Chronic Liver Disease

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Chettinad Health City Medical Journal 2017; 6(2): 81

### Abstract

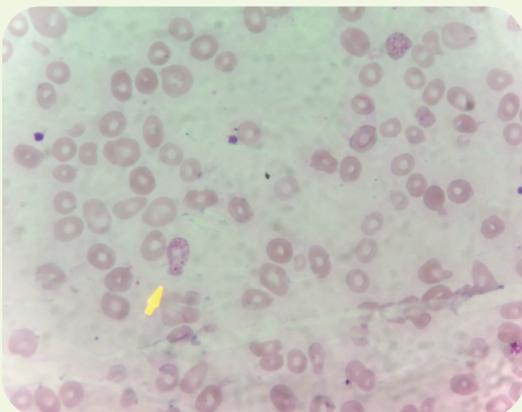
**Introduction:** The liver plays a key role in blood glucose control. In presence of cirrhosis of liver, the metabolic homeostasis of glucose is impaired. Diabetes mellitus in cirrhosis may be subclinical, since fasting glucose may be normal. Hence post-prandial blood glucose level by oral glucose tolerance test may be a simple indicator of liver disease.

**Materials and Methods:** 50 patients with cirrhosis of liver were included in this study, after getting informed consent. Diabetics, pregnant women, drugs and diseases causing hyperglycemia were excluded. OGTT was performed and correlated with Child Pughs scoring system.

**Results and Conclusion:** In this study of OGTT in chronic liver disease, diabetes mellitus was detected in 8% of patients -hepatogenous diabetes; and impaired glucose tolerance in 40%, thus showing abnormal glucose homeostasis in 48% of patients overall. Impaired glucose tolerance was seen in 77% of patients in Child Pughs category B. This indicates that as the liver disease advances, diabetes becomes clinically manifest. Hepatogenous diabetes can be considered as a marker for liver function deterioration. Hence in patients having advanced chronic liver disease (Child Pughs category B), OGTT may be done to assess the severity of liver disease.

**Key words:** Chronic liver disease, Glucose homeostasis, Oral glucose tolerance test, Child-Pugh score

### Image Challenge - 5



Clue: Identify the abnormality on the peripheral smear

- Answer in page : 96

## A Study of Serum Iron and Serum Ferritin Levels in Chronic Renal Failure

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Chettinad Health City Medical Journal 2017; 6(2): 82

### Abstract

**Objective:** Aim of this study was to observe serum iron and serum ferritin levels in patients with chronic renal failure.

**Methods:** 50 patients with chronic renal failure were selected for study, irrespective of their age, sex, clinical profile and etiology, and they were subjected to serum iron and serum ferritin levels.

**Results:** In this study 14 (28%) patients had serum iron levels less than the lower limit of normal range among which 11(22%) were males and 3(6%) were females. 12 (24%) patients had serum ferritin levels less than the lower limit of normal of which 6 patients were on hemodialysis. The mean serum iron for the 29 patients on oral iron supplementation was 58.76 mcg/dL, whereas the mean serum iron for the 21 patients on IV Iron supplementation was 68.38 mcg/dL. The mean serum ferritin for the 29 patients on oral iron supplementation was 118.34 ng/ml whereas the mean serum ferritin for the 21 patients on IV iron supplementation was 311.76 ng/ml.

**Conclusion:** Intravenous iron supplementation was found to be more beneficial than the oral iron supplementation in all CRF patients irrespective of whether the patient was on hemodialysis or on medical management, in treating iron deficiency associated with anemia of chronic renal failure.

**Key words:** Chronic kidney disease, Iron, Ferritin

### Image Challenge - 6



**Clue:** Elderly male with sudden onset of dyspnea in the background of significant weight and appetite loss.

- Answer in page : 87

## A Study on Serum Magnesium Levels and Its Correlation With Microvascular Complications In Type 2 Diabetes Mellitus

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Chettinad Health City Medical Journal 2017; 6(2): 83

### Abstract

**Introduction:** Diabetes mellitus is a metabolic disorder which results from defect in insulin secretion or action and leads to several micro and macrovascular complications. Minerals such as magnesium play an essential role in glucose homeostasis and low levels of serum magnesium have been found to be associated with micro and macrovascular complications in diabetes.

**Aims and Objectives:** To assess the level of serum magnesium levels in Type 2 DM patients and to correlate serum magnesium concentration with microvascular complications in Type 2 DM .

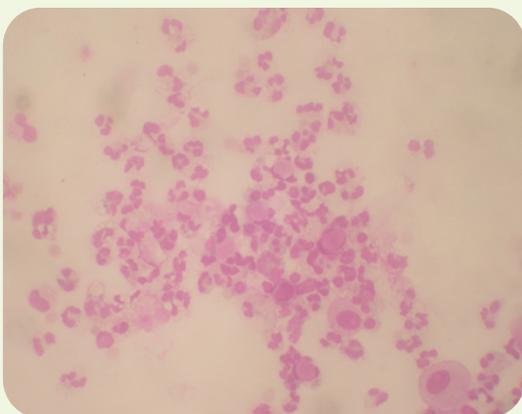
**Materials and Methods:** 105 patients presenting to the outpatient department or admitted in the general medicine ward were subjected to clinical examination and investigated for FBS, PPBS, HbA<sub>1c</sub> and serum magnesium levels. Microvascular complications were assessed using urine spot PCR for nephropathy, Toronto clinical scoring system for neuropathy and fundus examination for retinopathy. Statistical analysis was done using appropriate methods and p value < 0.05 was considered statistically significant.

**Results:** Of the 105 patients included in the study, mean age was 56.92 years with 48.6% males and 51.4% females. Mean serum magnesium level was  $1.965 \pm 0.177$  mg/dl. Mean duration of diabetes was 8.53 years. Among the patients with low magnesium levels, 8.6% had diabetic retinopathy, 15.2% had diabetic neuropathy and 14.3% had diabetic nephropathy. Correlation between hypomagnesemia and all three microvascular complications were statistically significant ( $p < 0.001$ ).

**Conclusion:** Patients with longer duration of diabetes had low magnesium levels and hypomagnesemia was significantly associated with microvascular complications.

**Key words:** Diabetes, Magnesium levels, Microvascular complications, Macrovascular complications

### Image Challenge - 7



**Clue:** A known case of SLE, came with progressive abdominal distension. Examination showed ascites. Paracentesis was done, and cytological examination of the ascitic fluid showed: Identify the abnormal cell.

- Answer in page : 88

## Case Series of Unusual Presentations of Tuberculosis

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Chettinad Health City Medical Journal 2017; 6(2): 84

### Abstract

**Introduction:** Tuberculosis is a multisystem disease with numerous complications. We hereby present four cases of unusual presentations and complications of tuberculosis that presented to our institute.

#### Case profiles:

- 1) 50-year-old male presented with fever, lymphadenopathy and cough. Radiological evaluation showed features of lung secondaries with primary focus in liver. Biopsy was suggestive of nonspecific granulomatous disease with pleural fluid analysis suggestive of Tuberculosis. Patient treated with antituberculous (ATT) drugs and had resolution of lesions
- 2) 24-year-old male diagnosed as sputum positive Tuberculosis outside developed transverse myelitis secondary to tuberculosis. Treated with Methylprednisolone and switched to oral steroids with continuation of ATT. Patient had resolution with regain of normal function.
- 3) 19-year-old male presented with fever of one-month duration and bilateral ankle and knee arthritis and effusion came to our institute with right pleuritic pain. Pleural fluid analysed and diagnosed as TB with rheumatological manifestations - Poncets Disease after thorough work up. He was started on ATT and oral steroids and complaints resolved.
- 4) 45-year-old male presented with acute respiratory distress on ventilator support for 3 weeks in outside hospital. He was diagnosed as pulmonary tuberculosis by bronchoscopy, started on ATT and weaned off ventilator.

**Conclusion:** Tuberculosis has a wide spectrum of organ involvement and the presentation is not always straight-forward. High degree of suspicion and thorough work up is required to diagnose tuberculosis. Judicious and appropriate use of steroids is indicated in complications due to tuberculosis.

**Key words:** Tuberculosis, Unusual presentation, ARDS, Poncets disease, Transverse myelitis

### Image Challenge - 8



Clue: 75 year old lady with clinical features suggestive of bronchiectasis

- Answer in page : 89

## A Cross Sectional Study of Cardiovascular Changes in Chronic Liver Disease

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Chettinad Health City Medical Journal 2017; 6(2): 85

### Abstract

**Introduction and aims:** Cirrhosis is associated with several hemodynamic changes like hyperdynamic circulation, increased cardiac output, increased heart rate and decreased systemic vascular resistance which are collectively called cirrhotic cardiomyopathy. The measurement of circulating levels of cardiac biomarkers may aid in the diagnosis. Early diagnosis and management of cirrhotic cardiomyopathy is essential to reduce morbidity. The aim of this study was to evaluate the cardiac biomarkers in CLD, and correlate them with severity of liver disease.

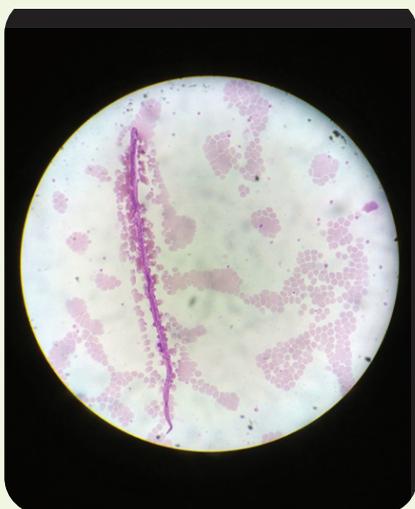
**Study Design:** 50 adult patients diagnosed with chronic liver disease were subjected to detailed history, examination, preliminary tests, and cardiac markers namely Troponin I, CKMB and NT pro BNP were performed. The Child Pugh and MELD scoring were done in these patients to assess the liver disease severity and compared with the cardiac markers.

**Results:** Mean age was 46.48 years, 84% subjects were male and 68% had history of alcohol intake. Troponin I was elevated in 24% of study subjects. There was a positive correlation between troponin I and increasing severity of liver disease as evidenced by Child Pugh score ( $p < 0.001$ ) and MELD ( $p = 0.015$ ). NT pro BNP levels also showed a statistically significant positive correlation with severity of the liver disease.

**Conclusion:** Troponin I proved to be a significant marker of myocardial injury in chronic liver disease patients. Elevated NT pro BNP may probably be due to fluid overload state related to liver disease. Therefore patient needs close monitoring for myocardial injury as there is demonstrable rise in cardiac markers with increasing severity of liver disease.

**Key words:** Chronic liver disease, Cardiac biomarkers, Child Pugh score, MELD score

### Image Challenge - 9



Clue: 22 Year old lady presented with fever with rigors. What is the abnormality in Peripheral smear?

- Answer in page : 91

## A Comparative Study of Knowledge and Awareness about Dietary Modifications in Kidney Disease Among Medical Interns and Final Year Undergraduates

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Chettinad Health City Medical Journal 2017; 6(2): 86

### Abstract

**Introduction :** Dietary factors may have an effect on the progression of kidney disease and its complications. Among CKD patients, over-nutrition results in sodium and volume overload, hyperkalemia, hyperphosphatemia, and accumulation of toxic metabolites of protein degradation. Under-nutrition, on the other hand, exacerbates the risk for malnutrition and wasting. Appropriate dietary interventions may have an effect on clinical outcomes in the CKD population and awareness regarding this is essential right from the undergraduate level.

**Aims and Objectives:** To assess the knowledge about dietary modification in kidney disease among the medical interns and final year undergraduates.

**Methodology:** 100 interns and 100 final year undergraduates from a university teaching hospital in semi-urban South India were given a set of questions related to dietary modifications in kidney disease patients. Each individual's score was calculated and the total mean score of 100 interns and 100 final year undergraduates was taken. The scores of both interns and final year undergraduates were compared using appropriate statistical methods. Performance in each question was also individually assessed.

**Results:** The mean score of final year Under Graduates was 48.12% whereas mean score of interns was 60.71% (p value = 0.24). There was no statistically significant difference overall. However the knowledge about individual questions in the questionnaire varied between the two groups. The interns had better knowledge about the type of protein intake ( $p < 0.001$ ) and awareness of salt restriction tended to be more among interns ( $p = 0.07$ ). However undergraduates seemed to have better knowledge regarding dietary modifications for CKD related bone disease.

**Conclusion:** The overall knowledge between the two groups was similar and there is a definite need for improving the knowledge about dietary modification in kidney disease. Focused teaching may help in practical application of theoretical knowledge.

**Key words:** Chronic kidney disease, Dietary modifications, Knowledge, Undergraduates, Interns

### Image Challenge - 10



Clue: 24 year old male came with breathlessness after consuming sea food

- Answer in page : 90

## Prevalence of Rheumatological Disorders in Diabetes Mellitus

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Chettinad Health City Medical Journal 2017; 6(2): 87

### Abstract

**Introduction :** Diabetes mellitus is associated with several musculoskeletal manifestations. We intended to study the most common rheumatological manifestations in our study group.

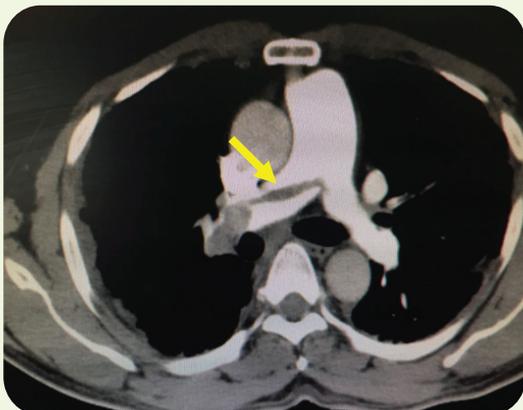
**Materials and Methods:** It is a cross sectional observational study for a period of 15 months. 174 out patients and stable in patients aged over 18 yrs, known diabetics were included in the study. Patients with renal osteodystrophy, rheumatoid arthritis, secondary osteoarthritis, history of trauma related musculoskeletal deformities and who have undergone surgery for musculoskeletal deformities were excluded.

**Results:** Of the 174 patients studied, age was less than 50 years in 78 patients (44.8%). Male population was 60 (34.5%). Duration of diabetes was less than 5 years in 36 patients (20.7%). Osteoarthritis was found in 77 patients predominantly involving knee (44.30%), peri arthritis shoulder was present in 44 cases (25.3%), neuroarthropathy was found in 29 cases (16.66%), Diffuse idiopathic skeletal hyperostosis (DISH) was found in 11 patients (6.3%), chieroarthropathy was found in 1 case (0.5%), others included cervical spondylosis and lumbar spondylosis induced restricted mobility.

**Conclusion:** Several rheumatic conditions are more prevalent or caused by the long term metabolic consequences of diabetes mellitus. Poor glycemic control and increased BMI had an adverse effect on the incidence of musculoskeletal disorders.

**Key words:** Diabetes, Rheumatological Manifestations, Peri arthritis, DISH

### Image Challenge - 6



**Answer:** Filling defect in the Right main pulmonary artery - pulmonary embolism secondary to gastric adenocarcinoma

## Prevalence of Dilated Cardiomyopathy in Chronic Alcoholics: A Prospective Study

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Chettinad Health City Medical Journal 2017; 6(2): 88

### Abstract

**Introduction :** The incidence of dilated cardiomyopathy appears to be increasing and is associated with significant morbidity and mortality. The aim of this study was to determine the prevalence of dilated cardiomyopathy in chronic alcoholics.

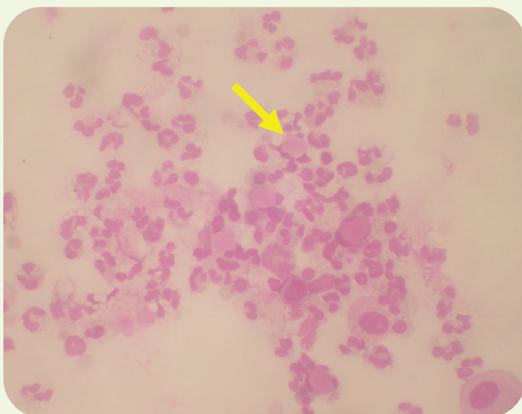
**Materials and Methods:** 50 patients who were fulfilling the inclusion and exclusion criteria were evaluated by history, physical examination, ECG and Echocardiography.

**Results:** Out of 50 chronic alcoholics studied, 10 patients were found to have dilated cardiomyopathy. Out of these 10 patients, 8 were found to have cardiac failure, 8 were found to have atrioventricular valvular regurgitation. Conduction disturbances were noted in most of the cases. Patients in the age group of 50 to 60 years who were chronic alcoholics showed high prevalence of dilated cardiomyopathy.

**Conclusion:** In this study it was observed that 20 % of patients who consumed alcohol regularly for a period of more than 20 years were found to have dilated cardiomyopathy.

**Key words:** Alcohol, Dilated cardiomyopathy, Prevalence

### Image Challenge - 7



Answer: LE cells in the ascitic fluid

## A Study of the Incidence and Factors Associated with Bleeding in Critically Ill Medical Patients on Pharmacological Prophylaxis for DVT.

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Chettinad Health City Medical Journal 2017; 6(2): 89

### Abstract

**Introduction :** Deep vein thrombosis is a frequent cause of preventable illness and death in hospitalized patients.

**Aim:** Aim was to study the incidence of bleeding in critically ill patients receiving anticoagulation for DVT and identify factors associated with bleeding.

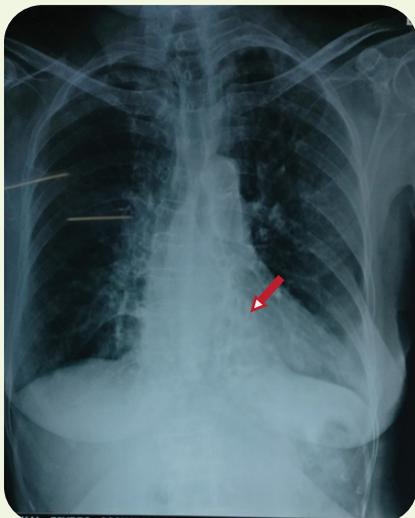
**Methods:** This study included 490 patients admitted in critical care receiving DVT prophylaxis. Patients requiring therapeutic heparin, pregnant women and patients at risk for bleeding diathesis were excluded. Patients were followed up throughout the course of hospitalization; investigations, treatment and clinical course including complications were recorded. Outcome was categorized as presence or absence of bleeding. These patients were further analyzed for identification of risk factors.

**Results:** The study included 490 patients, 282 males and 208 females. The incidence of bleeding in critically ill medical patients on prophylaxis for DVT was 5.9% (29 patients). Incidence of major bleeding was 1.6% and that of minor bleeding was 4.3%. The incidence of bleeding in study population receiving enoxaparin was 5.8% and those receiving unfractionated heparin was 7.3%. Bleeding along with other causes such as sepsis, shock, multi organ dysfunction syndrome [MODS] and CAD were major contributors of death in these patients. Risk factors for bleeding with anticoagulant therapy include older age, female sex, anemia, diabetes, hypertension, presence of cancer, alcoholism, prior stroke/intracerebral hemorrhage, concomitant use of antiplatelets, NSAIDs, steroids.

**Conclusion:** The incidence of bleeding in critically ill medical patients on DVT prophylaxis was 5.9% and patients with identified risk factors need to be monitored closely for bleeding, in order to reduce mortality.

**Key words:** Bleeding, DVT prophylaxis, Heparin, Critically-ill patients

### Image Challenge - 8



Answer: Retrocardiac collapse with bronchiectasis

## Study of Lipid Profile In Anemia

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Chettinad Health City Medical Journal 2017; 6(2): 90

### Abstract

**Introduction :** Anemia is reported to be associated with lowering in all lipid sub-fractions. The study was conducted to study the clinical features of anemia, effect of anemia on lipid profile & effect of severity and type of anemia on lipid profile.

**Methods:** The data for this study was collected from patients who presented to VMMC Hospital. 100 anaemic and 100 non-anaemic age and sex matched controls underwent clinical assessment and relevant investigations including lipid profile estimation.

**Results:** Cases younger than 50 years were found to be more likely to have severe anemia. Fatigue and pallor were the most common clinical features. The mean total cholesterol ( $132.2 \pm 29.0$  vs  $173.4 \pm 20.3$ ,  $P < 0.01$ ), HDL ( $31.0 \pm 6.7$  vs  $38.8 \pm 7.1$ ,  $P < 0.01$ ), LDL ( $79.7 \pm 25.0$  vs  $110.1 \pm 16.6$ ,  $P < 0.01$ ), VLDL ( $21.6 \pm 6.3$  vs  $24.5 \pm 6.2$ ,  $P < 0.01$ ) and Triglyceride ( $108.1 \pm 31.3$  vs  $122.5 \pm 30.6$ ,  $P < 0.01$ ) levels, along with TC/HDL ( $4.4 \pm 0.8$  vs  $4.6 \pm 0.7$ ,  $P < 0.05$ ) and LDL/HDL ( $2.6 \pm 0.7$  vs  $2.9 \pm 0.6$ ,  $P < 0.01$ ) ratios were significantly decreased in cases compared to controls. There was a larger reduction in mean total cholesterol, HDL, LDL, VLDL and triglyceride levels, along with TC/HDL and LDL/HDL ratios with increasing severity of anemia ( $P < 0.05$ ). Type of anemia did not have significant effect on the lipid levels ( $P > 0.05$ ).

**Conclusion:** Anemia is associated with significant hypocholesterolemia, with lowering in all lipid sub-fractions, the extent of hypocholesterolemia being proportional to severity of anemia. Further studies are required to study the long term effect of anemia on developing the risk of atherosclerosis, and effect of treatment of anemia on lipid levels and cardiovascular morbidity and mortality.

**Key words:** Anemia, Lipid profile, Hypocholesterolemia, Severity

### Image Challenge - 10



Answer: "Steeple Sign" in airway edema

## A Meta-Analysis to Assess the Effect of Vitamin D supplementation on level of Blood glucose in Prediabetes

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Chettinad Health City Medical Journal 2017; 6(2): 91

### Abstract

**Objective:** To systematically review and Meta analyze the selected randomized controlled trials (RCT) on effect of vitamin D supplementation on level of fasting blood glucose in pre-diabetes

**Methods: Design:** Systematic review and meta-analysis of randomized controlled trials.

**Data Sources:** PubMed/MEDLINE, Science Direct, Indian Citation Index, International Clinical Trials Registry Platform (ICTRP) (<http://www.who.int/ictrp/en/>) to identify unpublished studies, Google Scholar, Grey Literature and hand search were used and selected the study on randomized controlled trail from inception to December 2016.

**Eligibility criteria for study selection:** The eligible studies were randomised/ double blind/ placebo/controlled trials. Vitamin D in the form of D<sub>3</sub> (Cholecalciferol) or D<sub>2</sub>(Ergocalciferol), supplemented alone or in combination with calcium; dose and duration of supplementation; reported serum 25(OH) D and Fasting Plasma Glucose at the beginning and end of the intervention were considered.

**Data Extraction and Synthesis:** Reviewer collected the data and assessed the quality of the study by using Jadad score. The standardized mean difference was derived to assess the effect of vitamin D supplementation on Fasting blood glucose. Random Effect Model was followed to assess the meta-analysis and represented in Forest plot for comparison of Vitamin D vs Placebo or without supplementation on Fasting blood glucose.

**Results:** Meta analysis of pooled data of 1828 subjects in 11 RCT was done. The pooled significant mean difference on effect of vitamin D supplementation on fasting blood glucose was  $-2.01\text{mg/dl}$ ; (95%CI,  $-3.23$  to  $-0.79$ ;  $I^2=97\%$ ). The results showed that there was a small improvement in fasting blood glucose among vitamin D group compared with placebo or control group.

**Conclusion:** Larger randomized controlled trials are needed to assess the effect of oral supplementation of cholecalciferol on blood glucose.

**Key Words:** Meta analysis, Vitamin D, Level of blood glucose, Prediabetes.

### Image Challenge - 9



Answer: Microfilariasis

## Role of BNP As A Screening Tool To Identify Asymptomatic Cardiac Disease In Type 2 Diabetic Patients

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Chettinad Health City Medical Journal 2017; 6(2): 92

### Abstract

**Introduction :** Adults with diabetes have two to fourfold greater risk for dying from CVD compared to non-diabetics. Our objective of this study is how far BNP value will be useful in early detection of Left Ventricular Dysfunction (LVD) and ischemia without subjecting the patients to TMT and Echo.

**Materials and Methods:** This study was conducted in the Department of Medicine VMMC, Karaikal. Total number of patients included in this study were 77. This study was a cross sectional study and aimed to assess the diagnostic role of serum BNP level in asymptomatic type 2 diabetic patients for LV dysfunction.

**Results:** Among 77 patients 28 had sub-clinical LVD identified by a 2D echo and in these patients NT pro BNP was performed. NT pro BNP (>600 pg/ml) could predict diastolic dysfunction at a sensitivity of 64 % and with a negative predictive value of 73% ( $p < 0.001$ ). Hence BNP could be used effectively as a screening tool to identify diastolic dysfunction.

**Conclusion:** We conclude that single measurement of NT pro BNP at the diabetic OPD can provide important information about their cardiac status.

**Key words:** BNP, Screening tool, LV dysfunction

### Image Challenge - 1



Answer: Miliary Tuberculosis

## Study of High Sensitivity C-Reactive Protein In Chronic Obstructive Pulmonary Disease Among Smokers

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Chettinad Health City Medical Journal 2017; 6(2): 93

### Abstract

**Introduction :** In patients with COPD, systemic inflammation, in addition to local airway inflammation, contributes to pulmonary and extra-pulmonary complications of the disease. Systemic inflammation can be determined with markers of inflammation such as hsCRP, interleukins and TNF $\alpha$ . Among these markers, hsCRP is an important one. This study aims to evaluate the hsCRP in smokers with COPD.

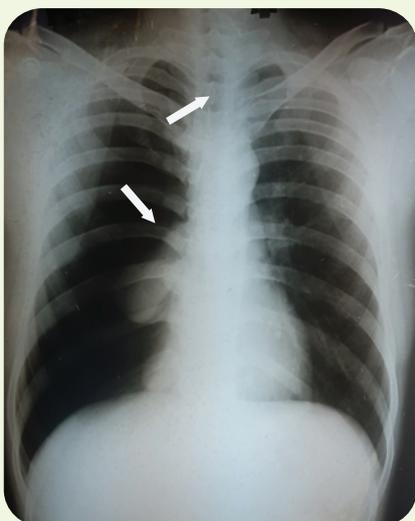
**Materials and Methods:** 80 cases were selected for the study after applying the inclusion and exclusion criteria. Pulmonary function test was done using the spirometer in the department of thoracic medicine and post bronchodilator values after 20 min of salbutamol nebulisation were recorded. Based on FEV<sub>1</sub> % predicted value patients were classified into stages based on GOLD guidelines. The hs-CRP was measured by nephelometric method using the turbid analyzer. Other parameters such as BMI, ESR, polymorph percentage, pack years of smoking were recorded.

**Results:** Serum hsCRP levels were significantly higher in patients with COPD which correlated with pack years of smoking and stages of COPD according to GOLD criteria. FEV<sub>1</sub> coef ESR= (-.1846), hsCRP= (-.2784) with significant p value <0.05.

**Conclusion:** Hs-CRP has been found to be significantly elevated with increasing severity of COPD. Polymorph percentages, ESR are not significant markers of inflammation in COPD. Physicians need to approach COPD as a multi system disease and identify patients with the associated co-morbidities of COPD vis-à-vis the extra pulmonary manifestations of COPD.

**Key words:** COPD, hs-CRP, ESR, Inflammatory markers

### Image Challenge - 2



**Answer: Right sided pneumothorax without mediastinal shift**

## Estimation of Prostate Specific Antigen in Metabolic Syndrome- A Study in South Indian Male Population

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Chettinad Health City Medical Journal 2017; 6(2): 94

### Abstract

**Introduction:** Prostate specific antigen (PSA) is a protease that is produced by secretory epithelial cells lining the prostate ducts in response to androgen receptor activation. Interactions between body adiposity and steroid hormone metabolism, the inflammatory response, or insulin regulation, are sufficient to affect PSA expression.

**Aim:** The purpose of this study was to determine the role of prostate specific antigen in Indian males and to assess its correlation with insulin resistance in metabolic syndrome.

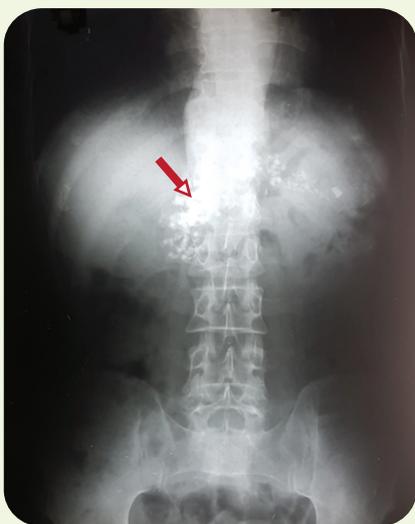
**Materials and Methods:** For this study, 62 male subjects of 40-65 years having metabolic syndrome were chosen. Body mass index, fasting blood sugar, serum prostate specific antigen, serum fasting insulin and insulin resistance were analyzed using multivariate regression analysis and ANOVA.

**Results:** There was no statistically significant difference between body mass index and prostate specific antigen, body mass index and insulin resistance, prostate specific antigen and triglyceride, prostate specific antigen and high density lipoprotein, and prostate specific antigen and fasting blood sugar.

**Conclusion:** There was no statistical significant difference between the various parameters like age, fasting blood sugar, triglyceride, high density lipoprotein, insulin levels and body mass index with PSA thereby indicating that there was no correlation between prostate specific antigen levels and metabolic syndrome.

**Key words:** Prostate specific antigen, Metabolic syndrome, South India

### Image Challenge - 3



Answer: Calcific pancreatitis

## Organophosphate Poisoning - Predictors of Requirement of Ventilator - A Prospective Study

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Chettinad Health City Medical Journal 2017; 6(2): 95

### Abstract

**Introduction :** Acute Organophosphate (OP) poisoning is one of most frequent poisoning encountered in casualty in which majority of cases are suicidal attempts. The aim of this study was to determine the predictors of respiratory failure and ventilator requirement in patients with organophosphate poisoning

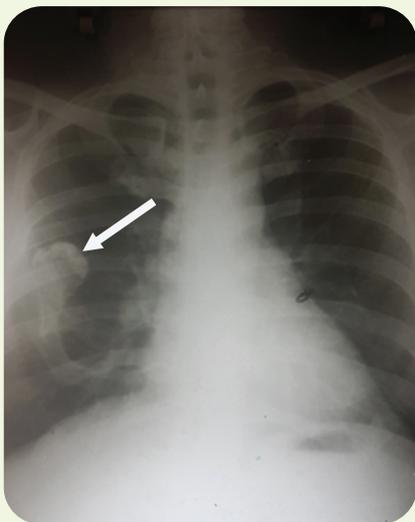
**Material and Methods :** 167 patients who were admitted with OP poisoning and fulfilling the inclusion and exclusion criteria were evaluated by physical examination and assessed on the requirement of ventilator support with ABG.

**Results :** Out of 167 patient enrolled in the study, 70 required assisted ventilation of which 35 patients required ventilator support within 24 hours of poisoning. 23 patients had complications of pneumonia and 12 had intermediate syndrome.

**Conclusion :** In this study, we found that greater time duration for institution of specific treatment, low level of sensorium at admission, grade 3 severity of poisoning, increased requirement of PAM, high initial atropine requirement for atropinization, presence of pneumonia and CVS collapse and low serum cholinesterase activity were predictors of respiratory failure.

**Key words:** Organophosphate poisoning, Respiratory failure, Ventilator, Risk factors

### Image Challenge - 4



Answer: Exostosis of the rib

## Validating the Fatty Liver Index For Prediction of Hepatic Steatosis in Patients Attending Tertiary Care Hospital in South India

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Chettinad Health City Medical Journal 2017; 6(2): 96

### Abstract

**Introduction :** Non alcoholic fatty liver disease (NAFLD) is the most common chronic liver disease in the western world and has now turned its expression towards the developing nations. The fatty liver index (FLI), which is an algorithm based on waist circumference, triglyceride, BMI and gamma-glutamyl-transferase (GGT), was initially developed in Italy to detect fatty liver, needs to be validated in our population.

**Materials and Methods:** The case control study included 160 patients aged 18 to 75 years of age, attending medicine OP, ward and gastroenterology clinic. Anthropometric and biochemical features were collected by a standard protocol. NAFLD was diagnosed by abdominal ultrasonography. The accuracy and cut-off point of the FLI to detect NAFLD were evaluated by Area under the receiver operator characteristic curve (AUROC) and the maximum Youden index analysis respectively.

**Results:** AUROC of the FLI was 0.773 (95% confidence interval: 0.701-0.836)  $p < 0.001$ , and its each individual component: waist circumference 0.772 (0.698-0.834)  $p < 0.01$ , BMI 0.757 (0.683-0.821)  $p < 0.001$ , triglyceride 0.518 (0.438-0.598)  $p < 0.694$ , and GGT 0.592 (0.512-0.666)  $p < 0.038$ . The optimal cut-off point of the FLI for diagnosing NAFLD was 60 with maximal Youden Index of 0.41, achieving a sensitivity of 62.5% and a specificity of 78.7%. FLI diagnosed NAFLD patients had worse metabolic characteristics than USG diagnosed NAFLD patients.

**Conclusion:** FLI could accurately identify NAFLD in the studied population. Attention should be paid to the control of metabolic parameters in the management of NAFLD.

**Key words:** NAFLD, Fatty liver index, Prediction, Hepatic steatosis, South Indian

### Image Challenge - 5



Answer: Basophilic stippling