Methods: This cross-sectional study was using data from a study reporting rate of severe hypoglycemia, which was conducted in endocrinology outpatient clinic of Cipto Mangunkusumo hospital, Jakarta, Indonesia. Patients' comprehension of hypoglycemia was defined as patients' ability to define cut-off value of hypoglycemia and mention at least three neuroglycopenic symptoms of hypoglycemia. Chi-square test and Mann-Whitney U test were implemented to analyze the association and difference between independent and dependent variables.
Results: Out of 291 patients, 62.9% were woman. All subjects had mean of age 59.9 (9.36) years old; median of HbA1c 7.5% (5.1-14.3), median of diabetes duration 12 (1-43) years. There was only 63 (21.7%) patients who had comprehension of hypoglycemia symptoms and signs. Patients in the group of age > 60 years old (OR 0.45; p = 0.006; 95% CI 0.25,0.80), HbA1c ≤ 7.5% (OR 0.53; p=0.026; 95% CI 0.30,0.93), education level ≤ 9 years (OR 0.39; p=0.013; 95% CI 0.18,0.84) and using sulfonylurea only (OR 0.49; p=0.025; 95% CI 0.27,0.92), were less likely to have comprehension of hypoglycemia. We found no association between diabetes duration and comprehension of hypoglycemia.
Discussion/Conclusion: Proportion of comprehending patients regarding hypoglycemia was still low. Older age, lower education level, poorer glycemic control, and use of sulfonylurea are associated factors of patients' comprehension of hypoglycemia. Our findings suggested that there was lack of education effectiveness in the continuum care of the patients. Further studies are needed to evaluate the needs of a better education structure for the T2DM patients.

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Abstract #1093100

A Study on Prevalence of Asymptomatic Pulmonary Hypertension in Patients of Metabolic Syndrome With Obstructive Sleep Apnoea

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Objective: To find out the presence of asymptomatic pulmonary hypertension by 2D ECHO who have metabolic syndrome by WHO diagnostic criteria (presence of insulin resistance plus any of the following two criteria, namely hypertension, hypertriglyceridemia, low HDL, BMI >30 mg/kgm2, urinary albumin: creatinine ratio > 30 mg/dl) and obstructive sleep apnoea done by polysomnography. The secondary objective is to assess diabetes status in patients with metabolic syndrome with obstructive sleep apnoea and asymptomatic pulmonary hypertension.
Methods: Study population: All patients attending tertiary care outpatient department for type 2 diabetes / pre-diabetes/dyslipidemia/hypertension/obesity are screened for the presence of metabolic syndrome features. Patients with chronic obstructive pulmonary disease, coronary artery disease, prior history of pulmonary hypertension, any pathological lung disease are excluded from the study. The patients who meet the criteria of metabolic syndrome are assessed with 2D Echocardiography for pulmonary hypertension.
Results: As a pilot study, 34 consecutive patients are found to have Metabolic Syndrome (MS) by WHO diagnostic criteria. 28 (82%) of MS patients have Obstructive Sleep Apnoea (OSA). 14 (50%) of them have Pulmonary Hypertension (PHT) by 2D Echocardiography. Prediabetes is more prevalent, 22 (65%) among MS patients than diabetes (32%). All but one patient who has no OSA is found to have moderate pulmonary hypertension. This patient has diabetes with more >10 yr duration, hence 2D ECHO was done, remaining 05 patients are pre-diabetic with no evidence of OSA (2D ECHO was not done to assess for pulmonary hypertension as they do not meet the criteria). Asymptomatic PHT is found in 6/12(50%) of diabetics and 8 /22 (Manuscript File Click here to view linked References 36%) in prediabetes. Except one, diabetes duration of all is less than 10 yr and all prediabetes are recently detected within one year.
Discussion/Conclusion: Our findings suggest that pulmonary hypertension is associated with a 4-fold higher occurrence in patients with MS and OSA. It is more prevalent in pre-diabetes and diabetes in this cohort. The detection of the association of DM, OSA requires further longitudinal studies to find out the association of asymptomatic pulmonary hypertension in the pathophysiology of heart failure with preserved ejection fraction in these subsets of patients. The prevalence of asymptomatic pulmonary hypertension in these cases increases with increasing severity of OSA, therefore, early detection will be beneficial.

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KIDNEY DISEASE AND DIABETES

Abstract #1082277

Urinary Albumin Creatinine Ratio Had No Significant Association With Retinopathy in Individuals With Type 1 Diabetes Mellitus

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Objective: The relationship between diabetic retinopathy (DR) and nephropathy in type 1 diabetes mellitus (T1DM) is controversial. This study tried to assess the correlation between the spot urinary

albumin creatinine ratio (UACR) as a parameter for diabetic nephropathy with DR in individuals with T1DM in Basrah-Southern Iraq.
Methods: The study was a cross-sectional observational study on 216 patients with T1DM older than 16 and less than 50 years old, with different DR types. We used different demographic variables (gender, age, and body mass index), different T1DM-related variables (onset and duration of T1DM, renal function, glycemic control, anti-GAD-65 antibody, latency between T1DM and DR onset, age onset of DR), and biochemical investigations, like spot UACR, renal function test, glycated hemoglobin, anti-glutamic acid decarboxylase-65 (anti-GAD-65) antibody, lipid profile, and thyrotropin stimulation hormone. We used ordinal regression analysis to test the possible primary covariates, then we create a composite regression factor by the principal component analysis and dimension reduction, to be used later to adjust the findings by the implementation of an analysis of covariates (ANCOVA). The receiver operating characteristic (ROC) curves provided the cut-off UACR values, and augment the significance of the relationship. The significance level was tested using a two-tailed significance level $\leq$ of 0.05.
Results: The study showed slight male preponderance. There were 93% of the cohort showed uncontrolled T1DM with high HbA1c. The mean UACR was (64.37 $\pm$ 8.99 mg/g). Normal UACR levels were seen in about 60% of the cohort (n=129). Sixty-five individuals were reported to have DR, with a median age onset of 34 $\pm$ 8 years, with a median latency period of 13 $\pm$ 7 years. UACR had no significant relationship to the DR development at any association level, whether with or without adjustment with the composite regression factor which composed of (gender, present age, BMI, onset and duration of T1DM, renal function, glycemic control, anti-GAD-65 antibody, latency between T1DM and DR onset, age onset of DR) with different component loadings.
Discussion/Conclusion: There was no significant association between UACR at any level with DR development before and after adjustment for all the possible covariates in this study.

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Abstract #1088698

Trends in Chronic Kidney Disease and Determinants of Access to Renal Transplantation: A Retrospective Analysis

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Objective: To determine the trends in renal transplantation following chronic kidney diseases (CKD) and factors that determines access to renal transplantation.
Methods: We used data from the National Inpatient Sample (NIS 2005-2017) database to retrieve all hospitalizations associated with CKD. The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) diagnosis codes were used to identify the study cohort. Primary outcome was the trends in CKD and renal transplantation. Secondary analysis using multivariate logistic regression was employed to determine predictors of access to renal transplantation. Gender disparity in access was determined by comparing the prevalence of renal transplantation between females and a propensity score matched group of males. Samples were weighted to generate national estimates.
Results: There were 9,258,501 hospitalization associated with CKD in the NIS 2005-2017. Only 0.45% of these patients received renal transplantation during the study period. The trends in CKD increased from 2,562 per 100,000 to 12,649 per 100,000 hospitalizations from 2005-2017. The trends in renal transplantation however stabilized at 0.43% from 2011-2017 (P trend > 0.05). While black race and public insurance had the highest prevalence of CKD, Hispanics (OR=1.42; 95% CI 1.25-1.61 $p < 0.05$) and patients with private insurance (OR= 1.63; 95%CI 1.56-1.70, $p < 0.05$) were more likely to have renal transplantation following CKD than others. Males retained a higher access to renal transplantation compared to a matched group of females (56.9% VS 43.1%) having controlled for age, race and insurance type. ($\chi 2=118.14$, $p < 0.05$).
Discussion/Conclusion: The increasing prevalence of CKD has not led to a corresponding increase in the rate of renal transplantations. Significant disparities still exist in access to renal transplantation among CKD patients in the USA.

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LIPIDS

Abstract #1093061

A Case of Heterozygous Familial Hypercholesterolemia in a Patient With a History of Statin-Induced Myopathy With Incomplete Response to PCSK9 Inhibitor Monotherapy

Author Block: James Turner - University of Tennessee Health Science Center

Introduction: A patient with markedly elevated LDL and a history of statin-induced myopathy was referred to Lipid Clinic for management of hyperlipidemia. Genetic testing was performed which confirmed the diagnosis of Familial Hypercholesterolemia. It also revealed the presence of a mutation of SLCO1B1 which has been associated with statin-induced myopathy. The patient did not reach the desired LDL goal with PCSK9 inhibitor alone. This case report explores the management decisions made to balance the benefits of LDL reduction with the risk of statin-induced myopathy in a patient with multiple mutations contributing to his hyperlipidemia.
Case Description: The patient is a 42-year-old Male with a PMH of HLD, History of Statin-Induced Myopathy, and HTN who was referred to Lipid Clinic for management of his hyperlipidemia. His family history includes ASCVD in multiple first-degree relatives. 11 years ago, the patient's LDL was discovered to be 332. He was started on Simvastatin, but he was unable to tolerate the medication due to significant myalgia and myopathy. At the time of his referral to the Lipid Clinic, the patient's LDL was 329. He had been started on low-dose Atorvastatin by his PCP, and he was tolerating this dose without myalgia or myopathy. The patient was found to have a heterozygous mutation of the LDL Receptor: LDLR (c.682G >T(p.Glu228Ter)). He was also noted to have a heterozygous mutation of SLCO1B1: (12:g.21130388G >A) which has been associated with statin-induced myopathy.

Atorvastatin was gradually increased from 10 mg to daily to 40 mg daily. The patient began to experience myalgias 40 mg daily. Atorvastatin was discontinued, and Alirocumab monotherapy was initiated. LDL improved significantly to 176, but this was still above the goal desired for primary prevention of ASCVD. Because the patient had previously tolerated low-dose Atorvastatin for several months, it was decided to resume low-dose statin therapy as well as Ezetimibe in addition to PCSK9 inhibitor therapy in order to achieve desired LDL reduction. The patient has so far tolerated low