of NAFLD has not been studied. **Objective:** To study the fetuin-A levels in patients with NDD and its correlation with NAFLD. **Methods:** A total of 60 newly diagnosed type 2 diabetes (NDD) were studied. Diagnosis of NAFLD was made on the basis of transient elastography. Serum fetuin-A and serum fasting insulin were measured along with other investigations. **Results:** Percentage of patients with NAFLD in NDD was 53.33%. Fetuin-A levels were significantly higher in NDD with NAFLD compared to those without NAFLD. There was no association of fetuin-A with age, both systolic and diastolic blood pressure, FBS, HbA1c, fasting insulin, HOMA-IR, QUICKI and markers of advanced fibrosis. Fetuin-A levels beyond 1166.5 mcg/ml could predict the development of NAFLD with OR of 4.33 (95%CI:1.364–13.77) which remained significant after adjustment for various confounding factors. **Conclusion:** Fetuin-A is a reliable marker of NAFLD in NDD and is positively associated with IR. The observation in this study suggests that high serum fetuin-A levels in patients with NAFLD do not merely reflect the effects of insulin resistance, but also a more extensive distortion of liver architecture.

Diabetes Mellitus and Glucose Metabolism

DIABETES COMPLICATIONS AND COMORBIDITIES

Glycemic Control & Morbidity in Diabetics With COPD Exacerbation. A Retrospective Study.

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Background: Diabetes and chronic obstructive pulmonary disease (COPD) are widely prevalent and comorbidity with these diseases is quite common. However, there is limited data on the interrelation between glycemic control and COPD exacerbations in diabetic patients.
Objective: To study the association between pre-admission glycemic control and COPD clinical outcomes including mortality, risk of hospital readmission and the need for mechanical ventilation.
Methods: A retrospective population-based cohort study. We screened for patients with both diabetes and COPD exacerbation aged 35 years and above. Pre-admission glycemic control was defined by the last HBA1C level prior to hospitalization. Patients with HBA1C>8% were defined as uncontrolled. We evaluated the difference between controlled and uncontrolled groups in the rates of mortality, readmission and the need for mechanical ventilation. We examined demographic and clinical parameters that might reflect COPD severity including: COPD medication use, blood hemoglobin, platelets, LDH and CRP levels.
Results: 513 hospitalizations with diabetes and COPD were screened. 222 hospitalization were excluded either due to unestablished diagnosis of COPD or due to lack of HBA1C test in the preceding year. Of the remaining 291, 208 admissions were with controlled diabetes whereas 83 were uncontrolled. Although not statistically significant, the rate of re-hospitalization was higher in the uncontrolled group (OR 1.99, CI 0.99–4.0, p-value 0.051). There was no statistically significant difference in mortality (OR 1.6, CI 0.73–3.5, p-value 0.243). The use of oxygen and the need for noninvasive mechanical ventilation were significantly higher in the uncontrolled group (67.5% *vs.* 52.4%, p-value 0.019, 33.7% versus 18.8%, p-value 0.006, respectively). There was no significant difference in possible confounders tested between the groups.
Conclusion: Uncontrolled diabetes may adversely affect patients with COPD exacerbation. Larger studies are needed to conclusively determine the impact of glycemic control on COPD morbidity and mortality.

Diabetes Mellitus and Glucose Metabolism

DIABETES COMPLICATIONS AND COMORBIDITIES

Hyperglycemia Regulated Circulating MicroRNAs and Their Effects on Renal Function Decline in Type 2 Diabetes

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Background: It has been reported that microRNAs (miRNAs) play an important role in the pathogenesis of diabetic complications. We aimed to search for circulating miRNA that were associated with hyperglycemia in type 2 diabetes and examine their effects on renal function decline.
Methods: Using the next-generation sequencing-based HTG EdgeSeq miRNA platform, a total of 2,083 miRNAswere measured in baseline plasma specimens obtained from73 subjects with type 2 diabetes (T2D) and normal renal function (discovery panel) and 136 subjects with T2D and impaired renal function (replication panel). Subjects in both panels were followed for 6–12 years to determine eGFR decline. **Results:** We identified 11 candidate miRNAsthat were strongly associated with elevated levels of glycated hemoglobin (HbA1c) in both screening and replication panels. Using bioinformatics analyses, we found that the candidate miRNAs targeted proteins of 6 pathways (the Ras signaling pathway, Signaling pathways regulating pluripotency of stem cells, the MAPK pathway, Glutamatergic synapse, the Rap 1 signaling pathway, and the AMPK signaling pathway). Importantly, 4 of these 11 miRNAs were significantly associated with risk of renal function decline.
Conclusion: There were few previous reports about the association between circulating miRNAs, hyperglycemia, and diabetic kidney disease in T2D. The present study comprehensively examined and identified hyperglycemia-regulated miRNAs in human samples. Our finding are novel in that circulatingmiRNAsregulated by hyperglycemia are associated with risk of eGFR decline in T2D.

Diabetes Mellitus and Glucose Metabolism

DIABETES COMPLICATIONS AND COMORBIDITIES