**OP 29**

# Correlation between serum total bilirubin level and glycated hemoglobin among type 2 diabetic patients

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**Background**: Oxidative stress and inflammation play an important role in the pathogenesis of type-2 diabetes mellitus. Bilirubin is an important endogenous antioxidant and anti-inflammatory molecule. Within the physiological range, the total bilirubin is negatively and independently associated with type 2 diabetes mellitus therefore with HbA1 also.

**Objective**: The objective of this study was to assess the correlation between serum total bilirubin level and HbA1c in type 2 diabetic patients attending the Diabetic Centre Teaching Hospital Jaffna.

**Methods & Materials**: This was a hospital based descriptive cross sectional study conducted at Diabetic Centre, Teaching Hospital Jaffna. The sample collection was done at Diabetic Centre, Teaching Hospital Jaffna. Forty Type 2 Diabetic patients voluntarily participated in the study. Total bilirubin level was measured by Diazo with Sulfanilic acid method, and all the samples were covered with aluminium foil during the whole procedure and was processed within two hours of collection in order to reduce the photo degradation of bilirubin. HbA1c level was obtained from patient reports. All the data and results obtained were analysed using descriptive statistics with the help of SPSS (version 25).

**Results**: Statistically non-significant mild negative correlation $p>0.05$ [(p=0.139), (r= -0.240)] between serum total bilirubin and HbA1C among type 2 diabetic patients attending Diabetic Centre Teaching Hospital Jaffna was observed.

**Conclusion**: According to the results of this study, there was statistically non-significant mild negative correlation [(p=0.136), (r=-0.240)] between Serum Total Bilirubin and HbA1C among type 2 diabetic patients. It is recommended to study with the sample size higher than this size to observe more accurate correlations.