Med chem 2016, 6:10(Suppl)
http://dx.doi.org/10.4172/2161-0444.C1.028

Assessment of interleukin 6, high sensitive C-reactive protein and lipid profile levels among Sudanese with type 2 diabetes mellitus

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Aim of the Study: Assessment of interleukin 6, high sensitive C - reactive protein and lipid profile levels among Sudanese with type 2 Diabetes Mellitus.

Methods: A comparative cross sectional study was conducted during the period from 2013 to 2015 to assess the plasma levels of Interleukin 6, hsCRP and lipid profile among Sudanese with type2 diabetes mellitus. 200 patients with type2 DM were selected as a test group compared with a 100, age and gender matched healthy control group. Blood specimens were collected from both groups and glycated hemoglobin, IL6, hs-CRP and lipid profile were estimated. Spectrophotometeric methods were used for measurement of lipid profile. HbA1c was measured by using fluorescence immunoassay technology and the hsCRP was measured by using immune-turbidimetric method. Furthermore, Sandwich ELISA was used to estimate IL6.

Results: The results of this study indicated a significant increase in mean of the plasma IL6, hs-CRP and lipid profile of the test group when compared with the healthy control group, and a significant elevation in mean of the IL6, hs-CRP and triacylglycerol in uncontrolled type2 diabetic patients when compared with the mean of those controlled type2 diabetic but there was no significant differences in total cholesterol, HDLc, LDLc. Also there was a significant elevation in mean of plasma IL6, hs-CRP and lipid profile in obese with type2 DM when compared with the mean of non obese type2 diabetic patients.

Conclusion: Furthermore, the result indicated a significant positive correlation between hs-CRP in type2 diabetic patients to level of IL6, total cholesterol, LDLc and triacylglycerol; however, there was a negative correlation between hs-CRP to HDLc cholesterol. Moreover, there was no significant correlation between IL6 and lipid profile.