



## ▼ FACULTY ABSTRACTS

### F - 18 : A STUDY TO DETERMINE THE ASSOCIATION OF GAMMA GLUTAMYL TRANSFERASE LEVELS IN METABOLIC SYNDROME

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**Introduction:** Metabolic syndrome has already emerged as the major health problem in both developed and developing countries that causes huge economic burden to the world. Insulin resistance and inflammation are the two main underlying factors which lead to metabolic syndrome.

**Background:** Oxidative stress plays an important role in the etiology and progression of the metabolic syndrome. Increased production of reactive oxygen species (ROS) species may lead to the production of pro-inflammatory adipokines TNF- $\alpha$  and IL-6 which leads to insulin resistance. Glutathione (GSH), the most important nonprotein antioxidant in the cell requires Gamma-glutamyl transferase enzyme for its metabolism. Gamma-glutamyl transferase also known to have a pro-oxidant role may indicate the incidence of cellular oxidative stress. The aim of the study is to determine the levels of Gamma-glutamyl transferase in

metabolic syndrome patients and in normal healthy controls.

**Methodology:** 82 individuals were included in the study, 41 are selected as controls and 41 are selected as metabolic syndrome patients. BMI, Lipid profile, GGT and uric acid were estimated and Statistical analysis was done using SPSS (version 21).

**Result:** GGT and body mass index values are higher in cases than controls. High Density Lipoprotein and Total Cholesterol values are lower in cases than controls.

**Conclusion:** The study may be concluded that Gamma-glutamyl transferase a marker of oxidative stress is important in the diagnostic and prognostic aspect of metabolic syndrome.

**Keywords:** Metabolic syndrome, GGT, oxidative stress.