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**Serum GGT and serum ferritin as early markers for metabolic syndrome****Eli Mohapatra***Professor at AIIMS Raipur based in Raipur, Chhattisgarh*

**Background:** In India, the prevalence of lifestyle diseases like Diabetes, Hypertension, and Metabolic syndrome (MetS) is showing an upward trend. Gamma Glutamate Transferase (GGT) and Ferritin increase oxidant stress in the body through their role in Glutathione homeostasis and iron metabolism, respectively. The increases in oxidant stress increase the inflammatory load, a risk factor for Metabolic syndrome. These parameters are cheap, and patient-friendly, available in routine diagnostic labs compatible for follow up, relieving the already over burdened health system.

**Methodology:** In a case-control study, samples of 77 cases of Metabolic Syndrome and 77 age and sex-matched controls were analyzed for Serum GGT (by Modified IFCC) and serum Ferritin (by CLIA). Statistical analysis was done by SPSS 20.0 version.

**Results:** The mean±SD for Ferritin and GGT were 101.58 ±84.20 ng/dL and 36.67 ±26.40 IU/L respectively in cases whereas in control group these values were 38.38 ±29.26 ng/dL and 16.53 ±6.79 IU/L (p< 0.001). Positive and significant correlation was seen between GGT with TG (r-value- 0.376/ p-value-0.001) and GGT with waist circumference (r-value- 0.298/ p-value- 0.022). A positive and significant correlation was seen between GGT and Ferritin in cases with an r-value of 0.307 (p-value - 0.01).

**Conclusion:** The increased values of GGT and Ferritin in cases suggest an inflammatory load. The positive and significant correlation between GGT and Triglyceride- indicates its role in increasing oxidants' stress leading to inflammation and development of MetS. The association of Ferritin with MetS though insignificant, may be considered as a biomarker.

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