EOP11 CORRELATION BETWEEN TRIGLYCERIDE GLUCOSE INDEX AND LIPID PROFILES OF WOMEN WITH PCOS ATTENDING TEACHING HOSPITAL, JAFFNA

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INTRODUCTION: Polycystic Ovarian Syndrome (POCS) is a complex endocrinopathy, where Insulin Resistance (IR) and dyslipidemia are the prominent features, elevating Cardio-Vascular-Disease (CVD) risk factors and metabolic diseases.

OBJECTIVES: To evaluate the correlation between the Triglyceride Glucose-Index (TyG-Index) and lipid profiles of the women with PCOS.

METHODS: This was an analytical cross-sectional study. A convenient sampling method was used. Based on Rotterdam criteria women diagnosed with PCOS (125 nos.) were selected. Serum Total Cholesterol (TC) and Triglyceride (TG) levels were measured using enzymatic methods. The precipitation method was used to measure serum HDL-Cholesterol (HDL-C) level. The Fried Ewald's equation was used to calculate the serum LDL-Cholesterol (LDL-C). Fasting Plasma Glucose (FPG) level was estimated by the glucose oxidase method. TyG-Index was calculated. Ethical approval was obtained from the Ethical Review Committee, Faculty of Medicine. Descriptive analysis and hypothesis testing were used to analyze the data.

RESULTS: The mean TG and FBG levels were 1.12 ($\pm$0.51) and 5.01 ($\pm$1.26) mmol/L, respectively. The women were classified as non-diabetic ((77.6%), prediabetic (19.2%), and diabetic (3.2%), respectively, considering the FPG levels of 3.60–5.60, 5.60–7.0, and >7.0 mmol/L, respectively. The mean TgG- Indices of nondiabetics, prediabetic and diabetics were 8.17 ($\pm$0.51), 8.58 ($\pm$0.36), and 9.31 ($\pm$0.20), respectively. The TgG-index of nondiabetic women showed a highly significant relationship with LDL/HDL ($p<0.00$), TC ($p<0.00$), HDL ($p<0.00$), and LDL ($p<0.00$), likewise, prediabetic women showed asignificant relationship with LDL/HDL ($p = 0.002$), TC ($p = 0.017$), HDL ($p = 0.038$), and LDL ($p = 0.018$). However, the women with diabetes did not show significant relationship due to small number of women ($n = 4$; 3.2%).

CONCLUSION: The nondiabetic and prediabetic POCS women had increasing tendency of TyG-Index showing increasing tendency to develop diabetes. Thus, managing the lipid profile and glycemic control are crucial factors to improve the overall health outcomes of POCS women.