

Abilities of Triglyceride-Glucose-Body Mass Index and Triglyceride-Glucose-Index to Identify Dyslipidemia among the Women with Polycystic Ovary Syndrome Attending Teaching Hospital, Jaffna, Sri Lanka

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Polycystic Ovary Syndrome (PCOS) women often experience dyslipidemia. Triglyceride-Glucose-Body Mass (TyG-BMI) Index and Triglyceride-Glucose (TyG) Index might form valuable tools to identify dyslipidemia. The aim was to evaluate the efficacy of TyG- and TyG-BMI indices to identify dyslipidemia in PCOS women attending Teaching Hospital, Jaffna. This analytical cross-sectional study used a convenient sampling method. PCOS women (125nos., diagnosed by Rotterdam criteria) were selected. Total Cholesterol (TC) & Triglyceride (TG) (Enzymatic methods), HDL-Cholesterol (HDL-C) (precipitation method) and fasting plasma glucose levels (glucose oxidase method); height and weight were measured. LDL-C level, BMI, TyG- and TyG-BMI- Indices were calculated. Ethics Review Committee, Faculty of Medicine gave the Ethical approval. Elevated TG (12%, 15 nos.; >1.71mmol/L), TC (41.6%, 52 nos.; >5.18mmol/L) and LDL- C (89.6%, 112nos., 2.60mmol/L) levels were observed while 114 nos. (91.2%) had low HDL- C (1.55mmol/L) levels. Of the total women only 02 (1.6%) had normal lipid profiles and the rest 123 (98.4%) had at least one abnormal lipid parameter. The mean TyG- & TyG-BMI- Indices of the women were 8.19 (± 0.47) & 230.76 (± 52.86) respectively. The 112 women with elevated LDL levels showed positive correlations with TyG- ($r=+0.389$) and TyG-BMI-Indices ($r=+0.188$). The 114 women with low HDL, the TyG- ($r=-0.415$) and TyG-BMI Index ($r=-0.332$) showed negative correlations. The TyG- I and TyG-BMI-Indices could be used as valuable tools to identify dyslipidemia in PCOS women.

Keywords: *dyslipidemia, polycystic ovary syndrome, triglyceride-glucose index, triglyceride-glucose-body mass index.*