ABSTRACTS OF E-POSTERS
RESEARCH AND AUDITS CONTD.

RP 06

Evaluation of Lipid Profiles of Women with Polycystic Ovary Syndrome at Teaching Hospital Jaffna

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Introduction and Objectives

Polycystic ovary syndrome (PCOS) is an endocrine disorder in women, often due to altered lipid metabolism. Understanding the lipid profile is crucial to assess the cardiovascular risks of the targeted group. Our aim was to assess the levels of various lipid components in women with PCOS attending Obstetrics and Gynaecology Clinic at Teaching Hospital Jaffna.

Methods

This is an analytical cross sectional study. A convenient sampling method was used. Based on Rotterdam criteria during the clinical visit 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 Friedewald's equation was used to calculate the serum LDL-cholesterol (LDL-C). Ethical approval was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna. Statistical Package for Social Science (SPSS) version 25 was used to analyze the data.

Results

The mean TG level was 1.12 (±0.51) mmol/L, with 7 individuals having borderline (1.71 – 2.27 mmol/L) and 8 having high TG levels (2.27 – 5.70 mmol/L) comparable to the normal TG level (<1.71 mmol/L). The mean TC level was 5.13 (±1.29) mmol/L. Among the participants, 35 had borderline (5.18 – 6.22 mmol/L) and 17 had higher (≥ 6.22 mmol/L) TC levels than the normal TC cut-off value (<5.18 mmol/L). The mean HDL-C level was 1.13 (±0.27) mmol/L, with 16 individuals having average (1.30 – <1.55 mmol/L) and 98 having low HDL-C levels (< 1.30 mmol/L) than the high HDL-C level (≥1.55 mmol/L). The mean LDL-C level was 3.49 (±0.84) mmol/L, and 30 had a borderline (3.38 – 4.16 mmol/L), while 8 had very high (≥ 4.94 mmol/L) LDL-C levels.

Conclusions

The evaluation of the lipid profiles of women with PCOS is crucial to mitigating CVD risk, as evidenced by low HDL-C and high LDL-C levels. This underscores the importance of proactive measures against cardiac illnesses.

Keywords

Cardiovascular vascular disease risk, Lipid pattern, Polycystic ovary syndrome