

Postprandial lipid profile and Androgen status in polycystic ovarian syndrome (PCOS)

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Abstract

Objectives: Polycystic ovary syndrome (PCOS) is an endocrinopathy that affects women of reproductive age. PCOS shares components with the metabolic syndrome and has broad health implications. Lipid abnormalities, including elevated low-density lipoprotein (LDL), triglyceride levels and decreased high-density lipoprotein (HDL), are often found in women with PCOS. It is clear that obesity, insulin resistance and hyperandrogenism coexist in PCOS, and have independent and interactive effects on dyslipidemia

Aim: To study the relationship between postprandial Triglyceride as predictor for cardiac disease and Testosterone in reproductive age women with PCOS.

Patients and Methods: Postprandial lipid profile and Sex hormones level were measured in 40 PCOS patients and 35 control women without a known family history of PCOS. DRG-ELISA kit used to Testosterone and Sex Hormone Binding globulin, Biomerieux- VIDAS kit used to Estradiol follicular stimulating hormone and luteinizing hormone, enzymatic methods used for postprandial lipid profile measurement.

Results: A statistically significant differences were found in serum levels of postprandial Triglyceride, HDL-C, LDL-size & atherogenic index between the two groups PCOS and healthy control women ($p \leq 0.05$). also there was a highly significant difference in luteinizing hormone (LH), follicular stimulating hormone (FSH), estradiol (E2), sex hormone binding globulin (SHBG) and in Free androgenic index (FAI) ($p \leq 0.001$) and there was no significant in the level of testosterone between PCOS women and healthy control ($p = 0.56$). Serum Testosterone levels correlated significantly with Triglyceride ($p = 0.034$), LDL-size ($p = 0.021$), Atherogenic index ($p = 0.032$), BMI ($p = 0.012$), Age ($p = 0.016$) & it's reversely correlated with HDL-C ($p = 0.043$). Estradiol level correlated significantly with HDL-C ($p = 0.032$) in dyslipidemic women with PCOS.

Conclusion: These results suggest that postprandial elevation of Triglyceride is a predictor of cardiovascular diseases in PCOS reproductive age dyslipidemic women.

Key Words: Polycystic ovarian syndrome, postprandial lipid profile, Testosterone, Sex hormone binding globulin and free androgenic index.

الخلاصة

الأهداف:

داء تكيس المبايض (PCOS) هو من الامراض التي تحدث بسبب اعتلال الغدد الصم التي تؤثر في النساء في سن مبكر. داء تكيس المبايض يشترك مع المتلازمة الايضية ببعض المكونات. فيؤدي الى مضاعفات صحية واسعة ففي اغلب الاحيان يجد اختلال في ايض الدهون عند النساء المصابات بداء تكيس المبايض كارتفاع مستوى الدهون الثلاثية والدهون واطنة الكثافة مع انخفاض في الدهون عالية الكثافة. فمن الواضح حدوث السمنة، مقاومة الجسم للانسولين و زيادة الصفات الثانوية الذكرية تتعايش في النساء المصابات بتكيس المبايض. ولها تأثيرات مستقلة وتفاعلية مع اضطراب الدهون. **الهدف:** لدراسة العلاقة ما بين الدهون الثلاثية بعد مرور ساعتين من الوقت على وجبة الافطار (كممتنباً للامراض القلبية) والهرمون الذكري في النساء المصابات بتكيس المبايض.

