Introduction - Aim: To study the lipid profile of untreated adolescent girls with PCOS and examine possible correlations with somatometric measurements and hormonal factors.

Material - Methods: 120 untreated PCOS adolescent patients were included in the study. Rotterdam criteria were used for the diagnosis of the syndrome after clinical and laboratory examination.

Results: Mean values of total cholesterol (Chol), LDL, HDL, and triglycerides (Trig) were 165.5mg/dl, 95mg/dl, 53mg/dl and 74.5 mg/dl respectively. Comparing obese and lean patients, significant differences appeared between HDL, LDL, Trig and ATH Index (p<0.05). Additionally to the effect of BMI on lipid profile, increased FAI is independently associated with low HDL levels (p=0.007) and increased ATH index (p=0.037).

Conclusion: Lipid profile of adolescent girls diagnosed with PCOS is influenced by their BMI, which is usually elevated. However, androgen levels affect HDL levels and ATH index, independently of weight, burdening young females with increased risk of future cardiovascular disease.