Objective: To measure serum chemerin levels in women with polycystic ovary syndrome (PCOS) and assess their relationship with clinical, metabolic, and hormonal parameters.

Design: Clinical study.

Patients: 118 PCOS women (obese, n = 60; non-obese, n = 58) and 18 healthy normal-weight women (control group).

Measurements: Serum chemerin, leptin, adiponectin, testosterone (T), LH / FSH ratio, fasting glucose, fasting insulin, and plasma lipid levels.

Results: Body mass index (BMI), waist-hip ratio (WHR), fasting plasma glucose (FPG), fasting insulin (FIN), HOMA-IR, triglycerides (TGs), and LDL-C were higher in obese than in non-obese PCOS women (P < 0.05). In PCOS women, chemerin levels were positively correlated with leptin, BMI, HOMA-IR, and TGs, but negatively correlated with HDL-C (P < 0.05). Serum chemerin and leptin were higher in obese than in non-obese PCOS women (P < 0.001). Chemerin levels were significantly higher in non-obese PCOS women than in the control group (P < 0.05). There was no correlation between chemerin and adiponectin (P > 0.05); however, adiponectin levels decreased in obese PCOS women.

Conclusion: Chemerin is likely to be involved in the pathogenesis of PCOS.