C–Reactive protein levels in polycystic ovary syndrome, a marker of inflammation and cardiometabolic risk, an analytical study in India

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Background: Polycystic Ovary Syndrome (PCOS) is one of the main causes for infertility. Many studies show that PCOS is associated with production of some inflammatory factors like C-Reactive Protein (CRP) and Interleukine- 6 (IL6), Tumor Necrosis Factor (TNF-α) which have prognostic significance in analyzing the risk of future Cardiovascular Diseases (CVD). American Heart Association (AHA) has put forward C-Reactive Protein as a clinically useful marker for risk of Cardiovascular Diseases. Previous studies show an increased incidence of high levels of CRP in PCOS Patients as compared to controls. If such an Association is proved in our population, CRP can be used as an ideal marker to screen apparently normal young PCOS women for CVD. So we wanted to assess the CRP level in PCOS through this study.

Methods: This was an Analytical Study conducted the Outpatient Departments of Infertility and Gynecology in various hospitals of Jammu and Kashmir from the year 2021 to 2023. It was conducted among women of age 24 to 36 years who were diagnosed to have PCOS according to Rotterdam's Criteria, satisfying inclusion criteria. Women of age 24 to 36 years were taken as comparison group. The study was conducted on 70 PCOS women and 65 non-PCOS women who were taken as comparison group. Data was obtained with the help of appropriate questioner and laboratory investigations. CRP level was assessed by immunoterbidimetric method.

Results: CRP was found to significantly elevated ($P<0.01$) in PCOS (1.97±2.26) when compared to women without PCOS (0.26±0.4)

Conclusions: CRP was found to be significantly higher in PCOS women as compared to women without PCOS. Thus' CRP can be used as a tool to assess inflammatory state in PCOS.

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