

4<sup>th</sup> World Congress on

# POLYCYSTIC OVARIAN SYNDROME

October 26-27, 2018 | Boston, USA



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### **Combined oral contraceptive effects on low-grade chronic inflammatory mediators in women with Polycystic ovary syndrome: A systematic review and meta-analysis**

Polycystic ovary syndrome is associated with dyslipidemia, dysglycemia, metabolic syndrome, and low-grade chronic inflammation, which increase the risks for cardiovascular disease. Combined oral contraceptives may affect the mediators of low-grade chronic inflammation with potential additive risk in PCOS patients. This meta-analysis investigates the impact of oral contraceptive on markers of chronic inflammation in PCOS patients. Pubmed, Scopus, Cochrane database were used to search studies reporting on this matter in the target population. Twenty seven studies were selected, including a total of 838 women. The data were expressed as the standardized mean difference. The random-effects model was used to summarize effect sizes. Heterogeneity was examined using the Cochran's test (Q) and I<sup>2</sup> statistics. Most of the preparations increased C-reactive protein (CRP) in PCOS patients ( $p > 0.001$ ). The increase in homocysteine levels was not significant ( $p > 0.05$ ). Follistatin significantly increased with pills containing cyproterone acetate ( $p = 0.008$ ). Interleukin-6 changes were inconsistent and plasminogen activator inhibitor-1 decreased with pills containing desogestrel, norgestimate, and drospirenone. Collectively, the results of this review indicate that oral contraceptives modify most inflammatory markers of PCOS patients. However, the clinical implications are not clear yet and future studies must consider longer follow-up and the inclusion of objective clinical parameters.

### **Biography**

Sebastiao Freitas de Medeiros has completed this Master Degree at age of 34 years from the University of Sao Paulo, Brazil and PhD studies from the University of Adelaide, Australia. He is Associated Professor at the Federal University of Mato Grosso and Director of the Tropical Institute of Reproductive Medicine. Currently, he is President of the Brazilian Society of Gynecology Endocrinology. He has published 100 papers and has been serving as an editorial board member of the Brazilian Journal of Obstetrics and Gynecology and Editor-Chief of the journal Femina (Edited in Portuguese language)

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