

## Assessment of CYP 17 Gene Polymorphism in Subjects with Polycystic Ovarian Syndrome and Central Obesity in an Indian Subpopulation

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**ABSTRACT** An inconsistent association of the C/T allelic polymorphism at -34 site in the promoter region of the *CYP17 $\alpha$  hydroxylase* gene with polycystic ovarian syndrome (PCOS) and its metabolic complications has been observed throughout the world. The researchers aimed to find out any possible link of this polymorphism with PCOS and central obesity in a subpopulation of Eastern India. Serum testosterone, waist hip ratio (WHR) and body mass index (BMI) were analyzed in 60 PCOS cases against 54 matched control women. From RFLP analysis of the *Msp AI* digest of the PCR product of the target gene, the researchers assessed the association of the C/T polymorphism with PCOS and body fat indices in the case group. Significant increases in serum testosterone value and WHR were observed among the case group ( $p < 0.001$ ) without any definite increase in BMI ( $p = 0.08$ ). Allelic distribution for C/T polymorphism was in Hardy Weinberg equilibrium. The researchers did not find any significant association of C/T polymorphism with PCOS ( $\chi^2$  of 1.13 with  $p = 0.28$  and Odds ratio of 0.75 with a range of 0.448 – 1.26 at 95% CI) as well as with the WHR ( $\chi^2$  of 0.1 with  $p = 0.75$  and Odds ratio of 0.89 with a range of 0.426 – 1.85 at 95% CI). The results implicate that *CYP 17 $\alpha$  hydroxylase* gene is not associated with hyperandrogenemia and central obesity in PCOS patients in this study population and therefore suggest search for other candidate genes for this disorder in this region.