A two purpose use of Orlistat in obese women with polycystic ovary syndrome: Weight loss and Androgen reduction

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Introduction: Polycystic ovary syndrome (PCOS) is one of the most common endocrinopathies in young women. PCOS affects 6% and 8% of women in reproductive age. Hyperandrogenism is the hallmark of PCOS. Clinically, it is possible to observe hirsutism, acne, androgenic alopecia, and signs of virilization. Laboratory examination reveals increased androgen levels. Excessive androgen has an important role in the pathophysiology of PCOS. The aim of this study was to appoint evidence based and clinically applicable advises effect of Orlistat on weight loss and serum anderogen levels reduction in women with PCOS.

Methods: The present study was performed in the clinic of Infertility and Reproductive Health Research Center, Shahid Beheshti University of Medical sciences, Tehran, Iran. 32 PCOS patients were enrolled randomly. The Sera of androgens (Testosterone, 17(OH) P, DHEAS, SHBG were measured before and after treatment of 12 weeks with orlistat. For all patients performed Rotterdam Criteria and transvaginal sonography for evaluation of ovarian patterns. In this study, P<0.05 was considered to indicate statistical significance.

Results: The study included 32 patients. The mean age was 27.75±6.22 and the mean body mass index was 32.69±0.94 kg/m2. Comparing with baseline, treatment with orlistat resulted in a significant reduction in weight, BMI, and waist circumference (P=0.001). We found a remarkable reduction in total Testosterone levels (P<0.001). Treatment improved the SHBG plasma levels, but the difference was not significant. There was no reduction in other androgen levels. As an incidental finding we encountered with a 30 mm decreasing size of uterine leiomyoma.

Conclusion: This study showed a significant reduction on weight and total total Testosterone levels, as the most important androgenes in PCOS patients. Therefore controlling of weight and treatment by a short course of Orlistat can be useful in management of PCOS cases.