

Reverse of Endometrial Atypical Hyperplasia and Early endometrial carcinoma in PCOS women by Dydrogesterone plus Metformin:a pilot study

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Context: Young women with polycystic ovary syndrome (PCOS) have a high risk of endometrial carcinoma. We have published that combined treatment with Diane-35 and metformin has the potential to revert the endometrial atypical hyperplasia (EAH) and early endometrial carcinoma (EEC) into normal endometrial cells in PCOS who desired for preserving fertility. But this combined treatment cannot be used for those who have contraindications of oral contraceptives. **Objective:** In this study we used dydrogesterone plus metformin as alternatives, and evaluated the efficacy. **Methods:** This study was a prospective, self-controlled study that included 10 EAH patients and 7 EEC patients who met diagnosis criterion of PCOS and were complicating with high blood pressure and insulin resistance. All had signed informed consent. All patients were co-treated with dydrogesterone (20mg/day, during 5th-24th day of menstrual cycles) plus metformin 1000mg orally for 12 weeks. They were assessed by histological examination of D&C specimens obtained under hysteroscope after 12-weeks therapy. Before, during, and after treatment, the endometrial biopsies and blood samples of patients were obtained. **Results:** After 12 weeks of co-treatment, the endometrial lesions of all patients (10 EAH, 7 EEC) were reversed to normal endometrium, and no adverse effect was observed in coagulation, blood pressure, blood lipids, glucose and insulin. After 3-6 months follow-up, no patients were relapsed. Until now, 3 EAH and 1 EEC had successfully conceived. **Conclusion:** Low-dose dydrogesterone has the same efficacy to treat EAH and EEC as other progestogens. For some EAH and EEC patients in PCOS who were with hypertension, dydrogesterone may be the best choice, which was key to reverse endometrial lesions to normal. And in the combination, metformin may play a role to have synergistic effects with dydrogesterone.

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