

Combination of Diane-35 and Metformin to Treat Early Endometrial Carcinoma in PCOS Women with Insulin Resistance

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Abstract : Background: Young women with polycystic ovary syndrome (PCOS) have a high risk of developing endometrial carcinoma. There is a need for the development of new medical therapies that can reduce the need for surgical intervention so as to preserve the fertility of these patients. The aim of the study was to describe and discuss cases of PCOS and insulin resistance (IR) women with early endometrial carcinoma while being co-treated with Diane-35 and metformin. Methods: Five PCOS-IR women who were scheduled for diagnosis and therapy for early endometrial carcinoma were recruited. The hospital records and endometrial pathology reports were reviewed. All patients were co-treated with Diane-35 and metformin for 6 months to reverse the endometrial carcinoma and preserve their fertility. Before, during, and after treatment, endometrial biopsies and blood samples were obtained and oral glucose tolerance tests were performed. Endometrial pathology was evaluated. Body weight (BW), body mass index (BMI), follicle-stimulating hormone (FSH), luteinizing hormone (LH), total testosterone (TT), sex hormone-binding globulin (SHBG), free androgen index (FAI), insulin area under curve (IAUC), and homeostasis model assessment of insulin resistance (HOMA-IR) were determined. Results: Clinical stage 1a, low grade endometrial carcinoma was confirmed before treatment. After 6 months of co-treatment, all patients showed normal epithelia. No evidence of atypical hyperplasia or endometrial carcinoma was found. Co-treatment resulted in significant decreases in BW, BMI, TT, FAI, IAUC, and HOMA-IR in parallel with a significant increase in SHBG. There were no differences in the FSH and LH levels after co-treatment. Conclusions: Combined treatment with Diane-35 and metformin has the potential to revert the endometrial carcinoma into normal endometrial cells in PCOS-IR women. The cellular and molecular mechanisms behind this effect merit further investigation.

Keywords : PCOS, progesterone resistance, insulin resistance, steroid hormone receptors, endometrial carcinoma

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