Evaluating Endometrial Hyperplasia in Infertile Women with Polycystic Ovarian Syndrome in Roointan-Arash Hospital

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Abstract

Introduction: Polycystic ovary syndrome (PCOS) is the most common cause of oligoovulation and anovulation in infertile women. Prolonged endometrial exposure to estrogen and unopposed by the inhibitory effects of progesterone in these patients makes them susceptible to endometrial hyperplasia. The objectives of this study, was to determine the prevalence of hyperplasia in PCOS patients and effect of factors such as age, body mass index and endometrial thickness on the abnormality.

Materials & Methods: This cross-sectional study was conducted in Roointan-Arash Hospital during 2006 and out of 135 infertile women with PCOS, 106 patients were included in the analysis after considering the exclusion criteria. Patients were admitted in the first week of follicular phase (In patients with amenorrhea, at the time of referral to the clinic) in order to evaluate their endometrial thickness (ET) by transvaginal sonography and endometrial biopsy. The rest of the information was obtained by conducting interviews. The data were tested by χ^2, t-test and logistic regression and statistical analysis was performed by using JMP software (Version 4; SAS Institute, USA). P-values less than 0.05 were considered significant.

Results: Examination of endometrial biopsies (106) by one pathologist revealed that 46 (43.4%) cases had endometrial hyperplasias (EH), which were subsequently classified into 37 cases of simple and three cases of complex hyperplasias but six cases had cytological atypia. Meanwhile, 53 patients (50%) had proliferative and five (4.7%) had secretory endometria. Two cases, aged 28 and 38 years, were diagnosed as endometrial adenocarcinoma. The patients were divide into two groups with or without EH, except the two with adenocarcinoma. Mean age, BMI, and endometrial thickness were significantly higher in the hyperplasic group. Age >35 years (OR=3.62, p<0.01), BMI ≥30 (OR=5.86, p<0.001) and endometrial thickness >7*mm* (OR=5.86, p<0.001) were identified as risk factors for endometrial hyperplasia. In multiple logistic regression analysis of age, BMI and ET, age (p<0.0001) and ET (p<0.01) were each an independent factor for the development of endometrial hyperplasia following adjustment for the other two variables. Inter-menstrual spotting and menstrual irregularity were seen in 37 (80.43%) and 45 cases (97.83%) respectively.

Conclusion: The chances for EH in infertile women with PCOS will increase by age, obesity and ET thickness more than 7*mm*. However, age and ET were recognized as independent risk factors for EH.

Key Words: Endometrial hyperplasia, Polycystic ovarian syndrome, Infertility, Endometrial biopsy, Amenorrhea, Transvaginal sonography.

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