**ADVANCED TREATMENT OPTIONS FOR PATIENTS WITH PREMATURE OVARIAN INSUFFICIENCY**

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 **Introduction.** Currently, premature ovarian insufficiency (POI) remains a disease with an idiopathic etiology, There is no standard investigation of choice as well as treatment . POI is associated with typical menopausal symptoms that develop before the age of 40 years.

**The aim of the study.** Was to determine patients with a high risk of developing POI in the early stages and with the aim of informing them about the high probability of premature reproductive ageing and the prevention of infertility.

**Materials and methods.** The survey analysis involved 97 patients, aged 26 to 38 years without any secondary pathology, with the only complaint of menstrual irregularities during the past 12 months. A set of routine clinical and laboratory studies including hormonal examination was performed. All patients underwent transvaginal ultrasonography. In the additional studies section, patients were offered an examination to determine the levels of antimullerian hormone and antral follicle count in each ovary during ultrasound, as well as to measure ovarian volume.

**Results.** The study was done in three groups. The first group consisted of patients without any significant hormonal disbalance however the majority revealed a pronounced psycho-emotional factor. Group II consisted of patients who observed hormonal disorders such as hyperprolactinemia and increased levels of androgens. Patients with hyperandrogenemia were found to have insulin resistance, Group III consisted of patients with menstrual disorders such as persistent polymenorrhea and oligomenorrhea. In studying the family history of the majority of patients in this group, early menopause on the maternal line was noted. The evaluated time for menopause was calculated using mathematical equation, There is a risk for cardiovascular disease associated with early menopause. A 12 month follow up was done for women planning to conceive.

**Conclusions.** Late diagnosis of POI can result in use of assisted reproductive technologies using donor eggs. Hormone replacement therapy in patients with POI can help in the betterment of quality of life and reduces the risk of cardiovascular disease. Early diagnosis of POI can be considered as a prevention of infertility in this group of patients.