Primary ovarian insufficiency

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1 Primary ovarian insufficiency (POI) affects 1% of reproductive-aged women

In POI, ovarian follicles become depleted or dysfunctional in people younger than 40 years. Risk factors include family history, genetic abnormalities, smoking, medical or surgical treatments that disrupt ovarian function, infections, environmental factors, and metabolic and autoimmune conditions.[1–3] Most cases are idiopathic.[4]

2 Differential diagnosis for patients younger than 40 years presenting with oligomenorrhea or amenorrhea should include POI

Patients typically present with menopause-like symptoms (i.e., oligomenorrhea or amenorrhea, and hypoestrogenic symptoms including hot flashes, vaginal dryness or infertility). Pregnancy, polycystic ovarian syndrome, hypogonadotropic hypogonadism, thyroid dysfunction and hyperprolactinemia should be ruled out.[1] Diagnosis of POI can be determined after 4 months of amenorrhea and 2 measurements of follicle-stimulating hormone greater than 40 IU/L, taken at least 1 month apart.[2]

3 Genetic and laboratory investigations can identify some causes of POI

Patients should be offered genetic testing for Fragile-X and karyotyping to rule out Turner Syndrome and presence of Y-chromosome material.[2] Autoimmune investigations include screening for antithyroid and antiadrenal antibodies.[1] Further evaluation is not needed if POI is secondary to surgical or medical treatment (e.g., cancer treatments).

4 Patients should be counselled on increased risks of infertility, osteoporosis and cardiovascular disease

The rate of spontaneous pregnancy is low (5%).[3] Patients with POI respond poorly to ovulation induction and ovarian stimulation, and often require egg or embryo donation.[2] Patients with newly diagnosed POI should have baseline testing of bone mineral density, a lipid panel and annual screening for hypertension.[1] Lifestyle interventions (e.g., diet, exercise, smoking cessation) and supplementation of calcium and vitamin D may reduce the risk of osteoporosis, dyslipidemia and coronary artery disease.[1,2]

5 Patients with hypoestrogenic symptoms should be offered hormone therapy, which also reduces the risk of cardiovascular events and hip fracture

Replacing estrogen to premenopausal levels is critical. Estrogen can be administered transdermally or orally.[5] Patients with a uterus also require progesterone, either continuously or cyclically, for endometrial protection.[2] If desired, hormone therapy can be offered as a combined hormonal contraceptive.[5]

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