MANAGING YOUNG WOMEN NEARLY IN MENOPAUSE WITH HIGH FSH AND LOW AMH

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FSH and AMH are the two hormones best defining functional ovarian reserve (FOR), also sometimes called the growing follicle pool. FOR naturally declines with advancing age. What represents normal FOR changes, therefore, over time and FSH and AMH levels can determine whether a patients has low FOR only if age-specific FSH and AMH levels are used. When FSH is abnormally high and AMH is abnormally low for age, FOR is abnormally low, which means that the patients has fewer follicles/eggs left in her ovaries than 90% of here age-peers. She then suffers from premature ovarian aging (POA), by some also called occult primary ovarian insufficiency (oPOI). In other words, ca. 10% of all women, independent of race and ethnic background, suffer from POA/oPOI. Though relatively simple to diagnose, POA/oPOI, paradoxically, is, still, among the most frequently overlooked diagnoses because most infertility centers, still, do not use age-specific FSH and AMH levels. If age-specific FSH and AMH are used, the frequency of this diagnosis especially among women with so-called “unexplained infertility” is quite astonishing. Once a POA/oPOI diagnosis is reached, the next logical question is to ask what is the cause? Iatrogenic causes (surgery, chemo- and radiation therapy) are obvious; genetic causes (*FMR1, AIRE* gene) are also well known but are exceedingly rare. The most frequent associated finding is autoimmunity, though we can so far only speculate how autoimmunity is associated with POA/oPOI since, despite significant efforts, no autoimmune insult against ovaries has been ever detected except for the very rare autoimmune oophoritis, only seen in patients with Addison’s disease. We here will present a potential explanation for this paradox: As our center recently discovered, ovarian function can be adversely affected by adrenal insufficiency of the zona reticularis. Resulting hypo-androgenism in a woman can shut down ovarian function, at times to surprising degrees. The long suspected association between ovarian insufficiency (OI) and autoimmunity, therefore, really exists, though is not directed against ovarian epitopes but against the adrenals. Moreover, the resulting OI is not the classical primary form (PO) but a secondary form of OI (SOI). We will further explain how SOI can be differentiated from POI and why, SOI, paradoxically, offers in most cases a more favorable diagnosis than POI.