

Secondary amenorrhea reveals a polyglandular autoimmune syndrome of type II

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Introduction :

Auto-immune polyglandular syndrome type 2 (APS-II) is an autoimmune condition which combines Addison's disease (primary adrenal insufficiency) with another autoimmune pathology like thyroiditis, diabete mellitus, primary hypogonadism, vitiligo, Biermer anemia, etc. Patients can develop those pathologies concurrently or many years after the first manifestation. Prevalence of APS-II is 1 or 2 cases/100.000/year and the sex ratio is 3 women for 1 man. Genetic transmission is polygenic and multifactorial, suggesting an impact from the environment. Polymorphism of genes HLA, CTLA-4 and PTPN22 could explain this complex transmission. Different polyglandular autoimmune syndromes exist, each one distinguished by the genetics and the organs it affects.

Case:

We report a case of a 37-year's old woman addressed at our Endocrinology department for a secondary amenorrhea. After stopping her contraception, menstruations did not come back for six months and she lost nine kilograms in nearly six months. Nauseas, loss of appetite and flushes were present. Hashimoto thyroiditis has been diagnosed six years ago and therefore the thyroid function was substituted by 75 micrograms thyroxine. Explorations consisted in hormonal blood test, karyotype, ACTH test and renin activity measurement. High levels of gonadotrophins and ACTH in combination with low levels of estrogens, cortisol, aldosterone and DHEA suggested a deficit of hormonal secretion. Anti-adrenal and anti-ovary antibodies were detected in the blood test. Karyotype was 46XX. The ACTH test revealed an incapacity for the adrenal glands to produce and deliver cortisol (glucocorticoids). The aldosterone/renin activity measurements showed a deficit in mineralocorticoid secretion. The diagnosis of autoimmune oophoritis and Addison's disease was considered. Glucocorticoid (hydrocortisone) and mineralocorticoid (9- α -fluorohydrocortisone) substitution treatment was initiated.

Discussion:

One percent of women beneath 40 years suffer from autoimmune oophoritis which could also be one of the manifestations of APS. Therefore this diagnosis should be kept in mind when exploring secondary amenorrhea in young females. Antibodies attack steroid synthesis enzymes as 21-hydroxylase, 17-alpha hydroxylase and P450scc cytochrome. Autoimmune oophoritis results in a specific aggression of thecal cells causing a lack of estrogens but sparing preantral follicles. Preantral and antral follicles produce antimullerian hormone (AMH), which is a biological marker of the reserve of follicles. The AMH level remains high in autoimmune oophoritis. According to those findings, the pool of follicles seems to be preserved in autoimmune ovarian insufficiency cases. Immunomodulators could reduce the inflammation and protect the ovarian function. Glucocorticoid administration may partly restore the ovarian activity and two months after the intake, ovulation can occur but menstrual cycles remain fluctuant.

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