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AUTOIMMUNITY

Autoimmune Addison disease and premature ovarian failure

Autoimmune Addison disease is strongly associated with autoimmune premature ovarian failure (POF), report researchers from Italy and the UK.

Presence of autoantibodies to steroid-producing cells and to several steroidogenic enzymes (17α-hydroxylase and P450 side-chain cleavage enzyme) seems to be a hallmark in patients who have autoimmune Addison disease as well as POF, which suggests a link between the two diseases.

Reato *et al.* wanted to measure the prevalence of POF in patients with autoimmune Addison disease and also to assess the value of these three autoantibodies for the prediction of POF in patients with autoimmune Addison disease.

The researchers studied 258 women with autoimmune Addison disease followed-up at their clinic from 1971 to 2009; 49 women had type 1 autoimmune polyglandular syndrome (APS-1), 163 had APS-2, 18 had APS-4 and 28 had isolated Addison disease.

A high prevalence of POF in the cohort (20.2%) highlighted the strong association between the two conditions. However, prevalence of POF differed by type of APS, being most prevalent in patients with APS-1 (40.8%). Furthermore, no patient with isolated Addison disease had POF. Interestingly, POF tended to develop after Addison disease onset in women with APS-1 and APS-4 but before Addison disease onset in women with APS-2.

The researchers' findings highlight the value of the three autoantibodies tested as markers for POF in patients with autoimmune Addison disease. For example, among 31 women with both conditions tested for all three autoantibodies, 28 tested positive for at least one. In addition, follow-up of 41 women of <40 years with autoimmune Addison disease indicated that monitoring these three autoantibodies could aid prediction of the risk of POF.

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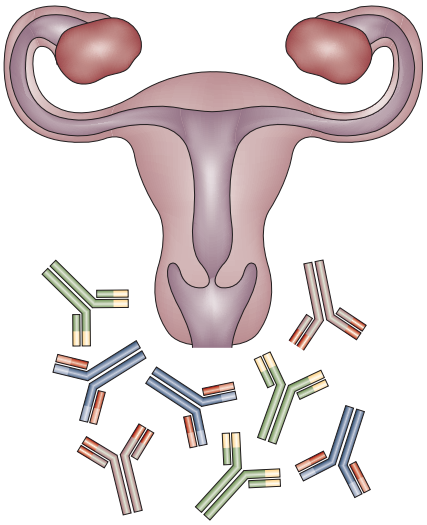

Original article Reato, G. *et al.* Premature ovarian failure in patients with autoimmune Addison's disease: clinical, genetic, and immunological evaluation. *J. Clin. Endocrinol. Metab.* doi:10.1210/jc.2011-0414