

Impact of Autoimmunity on Oogenesis and Ovarian Morphology

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Compromised tolerance to ovarian components can lead to autoimmune oophoritis. Histological examination of affected ovaries reveals a mononuclear infiltrate, in many cases initially restricted to the follicular theca and sometimes associated with polycystic appearance. Autoimmune oophoritis interferes with follicle maturation and eventually diminishes the number of growing follicles, with a corresponding impact on fertility and hormonal secretion. In severe cases, all follicles advanced beyond the primordial stage are destroyed, leading to premature ovarian insufficiency (failure). Among known autoantigens, most important are the components of zona pellucida and of steroidogenic cells. Autoimmune ovarian disease is often associated with Addison's disease. In some cases, it is a manifestation of autoimmune polyendocrine syndrome. Little is known at present about the effects of systemic autoimmune diseases on the ovary, but data from patients and animal models show decreased ovarian reserve.

Key words: autoimmunity, oophoritis, premature ovarian failure, oocyte, fertility