

MORPHOLOGICAL FEATURES OF OVARIAN APOPLEXY IN WOMEN OF FERTILE AGE WITH DIFFERENT VOLUMES OF HEMOPERITONEUM

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Ovarian apoplexy (apoplexia ovarii) is a sudden hemorrhage in the ovarian tissue during rupture of mature follicle vessels, follicular cyst, or corpus luteum cyst, accompanied by violation of the integrity of their tissues and bleeding into the abdominal cavity. The morphological changes in the ovarian tissue that caused the development of apoplexy are often of persistent nature and are not destroyed after treatment. It creates conditions for recurrence of the disease and violations in the woman's fertility.

The aim of the research is to determine the morphological changes in the ovarian tissue and the sources of ovarian apoplexy, paying attention to the peculiarities of their vascular walls depending on the volume of the intra- abdominal bleeding of women in the fertile age.

Materials and methods. 30 cases of ovarian apoplexy in women of fertile age were investigated. All the women were divided into two clinical groups, depending on the hemoperitoneum volume: 1st group- 15 women with up to 150 ml, 2nd group- 15 women with more than 500 ml. Some areas of ovarian tissue, which were taken during surgery, were the subject of the morphological research. The materials were fixed in 10% of neutral formalin, filled into paraffin. Paraffinated 5 micron thickened sections were stained in hematoxylin-eosin. For detection of collagen fibers- Van gizon. For detection of reticular fibers- silver salts impregnation by Foot. Glycoproteins were detected by PAS reaction by A.G. Shabadash (1979).

The results and their understanding. The research showed that the main morphological substrate of ovarian apoplexy, regardless of the hemoperitoneum volume, are corpus luteum cysts. It was found that small amount of hemoperitoneum (150 ml) is accompanied by minimal morphological changes in the ovarian tissue and in the corpus luteum cyst, appearing by non significant edema in tissues and small focal hemorrhages. In the corpus luteum's vascular wall in minimal hemoperitoneum volume non significant irregular thickening of the adventitia are observed due to small amount of collagen fibers. Unlike the 1st group, in the 2nd group with big volume of hemoperitoneum (more than 500 ml), dystrophic changes in the ovarian tissue and the corpus luteum are marked by slight staining of PAS-positive substances. The vascular wall of the corpus luteum cyst is dramatically thickened due to proliferation of thickened collagen and reticular fibers in the muscular layer and adventitia, which promotes increased rigidity of the vascular wall and destruction of its vasoconstriction function. It leads to large volume of hemoperitoneum during ovarian apoplexy. Non circular disorders are characterized by big focal bleedings in the ovarian tissue and corpus luteum cyst's wall with destruction of adjacent tissues.

This way, in increasing of hemoperitoneum volume dystrophic changes in the ovarian tissue and the apoplexy source appear. Sharp thickening of vascular wall and collagenization of adventitia increase the rigidity of vascular wall and altogether with the dystrophic changes promotes growth of hemoperitoneum volume and expressed non circular disorders.