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Histotopography and Morphological Features of Ovarian Cyst

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Annotation: With the purpose of quantitative determination of different forms of ovarian cysts, the peculiarities of histotopography of these pathologies in women in different age groups were studied by morphological methods. It is established that endometrioid cysts are the most frequent among these cysts and this pathology belongs to the group of oncological risk.

Keywords: ovarian cysts, clinical and morphological variants.

INTRODUCTION

The causes of ovarian cysts have not been definitively established. Disorders of gonadotropic hormones and apoptosis may play a role in the mechanism of cyst development. Despite the numerous causes of occurrence in our days this pathology remains fully understood. According to some researchers, the causes of ovarian cysts can be attributed to the lack of pregnancy in the reproductive age, abortions, disease of the endocrine system. Ovarian EM affects the ovaries at a young age (predominantly before 30 years of age). The presence of haemosiderin and siderophages in the surrounding connective tissue of endometrioid cysts, as well as significant ovarian fibrosis, indicate long-standing and possibly repeated ovarian damage of unclear genesis[1,3,4]. Significant ovarian damage in patients with ovarian EM is confirmed by high serum levels of oncogene CA-125 (exceeding normal limits almost 2-fold). The young age of the patients and the absence of invasive interventions in most cases suggest that genetic predisposition plays a major role in the development of ovarian EM [2,5,6,12]. In ovarian endometriosis, full-looking, enlarged, painful and immobile ovaries are palpated on one or both sides. Often they are a conglomerate of ovoid uterine appendages of various sizes, tight elastic consistency, limited mobility, located in the lateral or posterior vault, adherent to the uterus and the peritoneum of the rectovaginal space

Purpose of the work. To perform clinical and morphological analysis of ovarian cysts taking into account its different variants and morphofunctional forms.

MATERIALS AND METHODS

Morphological forms of ovarian cysts were studied in 55 women of reproductive age in Gijduvan district, Bukhara region, gynaecology department referred from the Republican Emergency Centre of Bukhara branch. Operative materials served as the material for the study. For general morphology, 2 pieces were cut from each endometrioid nodule, i.e. 1.5 × 1.5 cm from the centre and peripheral part and cured in 10% neutral formalin. After washing for 2-4 h in running water, it was dehydrated in concentrated alcohol and chloroform, then embedded in paraffin and blocks were prepared. Slices of 5-8 μm were made on paraffin blocks and stained with haematoxylin and eosin. Semi-thin sections of 1 μm thickness were obtained from Epon bricks on Leyka

ultramicrotomy. Histological preparations were examined under 10, 20, 40 light microscope lenses and the necessary sections were photographed.

RESULTS AND DISCUSSION

The surgical materials of 57 patients of women of reproductive age with various localisations of genital endometriosis removed during surgical operations were examined. The average age of patients was 36,8 ±0,74 years, 40% of patients were under 35 years old; 41% - from 36 to 45 years old; 22,2% - over 46 years old. The women were hospitalised as emergencies. On admission to the clinic, the examined women presented complaints related to various manifestations of pain syndrome and menstrual disorders. Periodic pain was reported by 52.6% of the patients, severe pain during the menstrual cycle was reported by 21.4% of the patients, pain before menstrual cycle was reported by 5.7% of the women. The indications for surgical treatment were: ovarian cystoma, uterine adenomyosis, combination of adenomyosis with cystic ovaries, uterine myoma and menstrual cycle disorders of the hyperpolymenorrhoea type. The scope of surgical interventions was supravaginal amputation of the uterus with appendages, extirpation of the uterus with appendages and removal of endometriod cysts of the ovaries. The removed preparations were carefully examined, the size of the cysts, their contents, the thickness of the endometrium, myometrium and ovaries were measured, and the presence of macroscopically visible pathological areas was determined. At macroscopic examination ovaries were seen in all cases. It is connected both with the growth of uterine myoma and the form and activity of adenomyosis foci. In focal adenomyosis, thickening of one or more of the ovaries was observed.

Table 1. Frequency of occurrence of different forms of ovarian endometriosis

Forms	Number in %
Follicular cyst of ovary	19(68 %)
Endometrioid cyst of ovary	7 (24%)
Cystoadenoma (serous and mucinous)	11(26%)
Paraovarian cyst of ovary	6(11%)
Dermoid cyst	3(14%)
Total	46

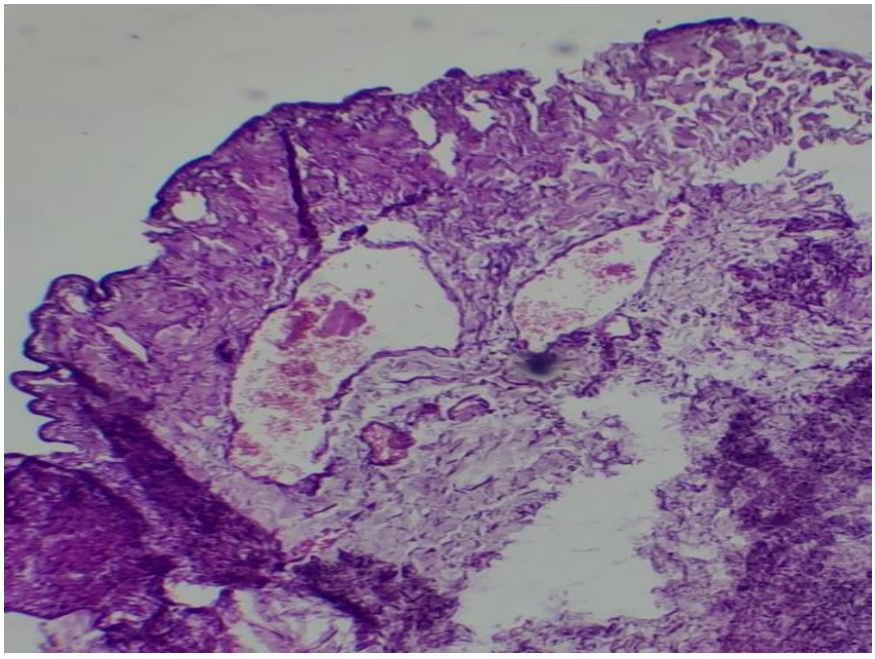

Figure №1. Microscopic papillary cystoadenoma of the ovary, the wall of which consists of endometrial cells. Haemotoxylin-eosin staining,10x20

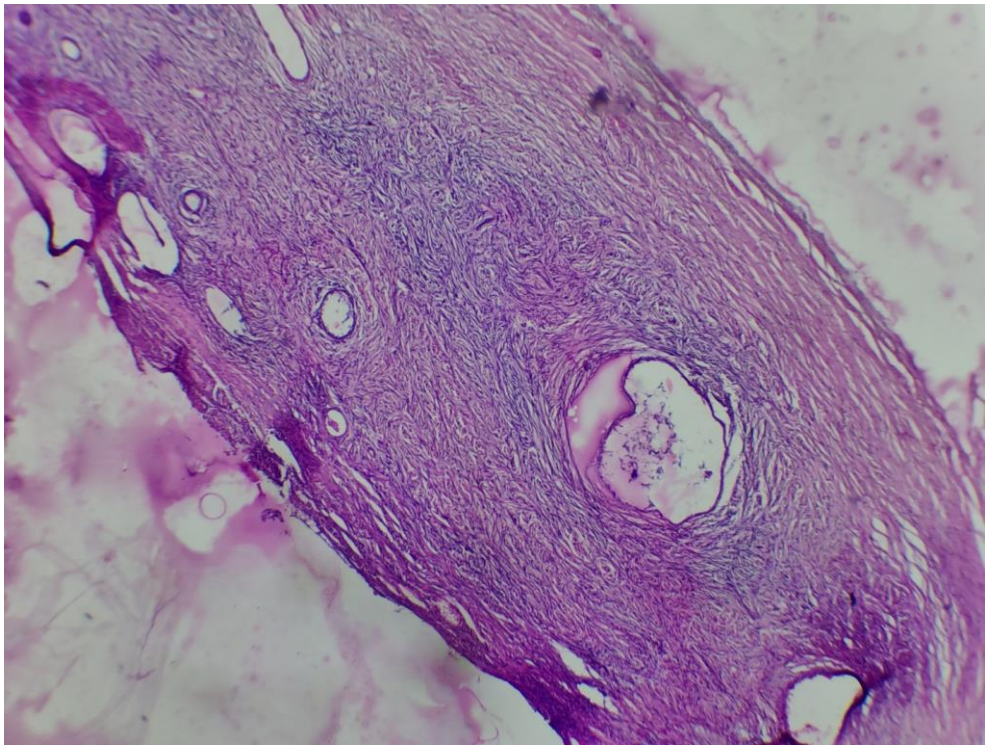

Figure № 2. Microscopic endometrioid cyst of the ovary, the wall of which consists of endometrial cells. 10x20 haemotoxylin-eosin staining.

Histologically, endometrioid foci were detected in the ovaries, which penetrated to different depths. The foci had two components, both stromal and glandular structures: the ratio of these components varied depending on the type of these nodules. In active adenomyosis, the glandular component was 27,4±7,4%, the stroma -72,5±6,4%, not significantly different from inactive foci - the proportion of glandular component and stroma respectively (30,5±11,4% and 70,4±11,4% at p=0,14 and 0,32).

Thus, the results of morphological studies have shown that in women ovarian cysts are among the most frequent pathologies. The existence of various forms of these pathologies and the development of issues of early diagnosis, prevention and treatment of precancerous changes of the ovary have a promising direction in reducing the incidence of ovarian cancer in the population of Uzbekistan. It is necessary to take into account when choosing a rational tactics of management of patients in the postoperative period to prevent recurrences.

CONCLUSION

The results of this study make it clear that benign ovarian cysts predominate among ovarian cysts. On our material endometrioid cysts were found in 31% of cases. These data are in agreement with the data of other researchers. Ovarian cysts are characterised by a prolonged asymptomatic or asymptomatic course followed by rapid development of clinical picture and the appearance of indications for surgical treatment. Cysts were diagnosed instead of myomas and adenomyosis in 7 cases, when the removed cyst in the ovary was inserted only 4%. It should be noted that this is mainly due to objective reasons: difficulties in cytological verification and rare forms of ovarian cancer; the presence of secondary circulatory changes in the ovary.

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