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PATHOMORPHOLOGICAL CHARACTERISTICS OF THE ENDOMETRIUM WITH ANTIPHOSPHOLIPID SYNDROME

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Abstract: The article highlights the pathomorphological characteristics of the endometrium in antiphospholipid syndrome. The basic information on the morphological characteristics of the antiphospholipid syndrome in obstetric practice is presented.

Keywords: antiphospholipid syndrome, antiphospholipid antibodies, recurrent miscarriage, thrombophilia, thrombosis.

Antiphospholipid syndrome (APS) is one of the most pressing multidisciplinary problems of modern medicine and is considered as a unique model of autoimmune thrombotic vasculopathy.

Many authors consider antiphospholipid syndrome as one of the main causes of miscarriage and antenatal fetal death. [4,5,6,8,9,11].

The prevalence of antiphospholipid syndrome in the population is precisely up to has not been established so far and, according to the literature, ranges from 0 to 14% [1,4,7,10]. Women are more susceptible to the disease (ratio 5:1). It should be noted that the antiphospholipid syndrome mainly develops at a young age and can be diagnosed even in newborns from mothers with antiphospholipid syndrome, which indicates the possibility of trans placental transmission of antibodies [2,3].

The most common and characteristic clinical manifestations of antiphospholipid syndrome are venous and arterial thrombosis and obstetric pathology. The peculiar vasculopathy that develops with antiphospholipid syndrome, due to non-inflammatory or thrombotic vascular lesions, leads to their occlusion. In this case, vessels of various caliber and localization are affected, which provides a wide range of clinical manifestations.

The aim of the study was to study the characteristics of the morphofunctional state of the endometrium in antiphospholipid syndrome.

Material and research methods

63 were examined women whose previous pregnancies were complicated by spontaneous fetal loss (main group). The control group consisted of 10 women, practically healthy women after medical abortion, unwanted pregnancy. All women of the main and women of the control group underwent general clinical examinations. In addition, immediately after the loss of the fetus and medical abortion due to unwanted pregnancy, endometrial scrapings were made for histological examination. Pathological examination of the placenta and histological examination of endometrial scrapings were carried out in the Department of Pathological Anatomy of the ASMI Clinic (headed by Assoc. Prof. Ablazimova T. B.).

The data obtained during the study were subjected to statistical processing on a personal computer Pentium - IV using the Microsoft software package office Excel -2007, including the use of built-in aggregation functions. Methods of variational parametric and nonparametric statistics were used with the calculation

of the arithmetic mean of the studied indicator (M), standard deviation (a), standard error of the mean (m), relative values (frequency, %), the statistical significance of the measurements obtained when comparing the average values was determined by the Student's criterion (t) with the calculation of the error probability (P) when checking the normality of distribution (according to the kurtosis criterion) and the equality of general variances (F - Fisher criterion). Significance level $P < 0.05$ was taken as statistically significant changes .

Research results.

The study of obstetric and gynecological history showed that the average age of menarhe did not differ significantly between these groups. Menstrual dysfunction included algomenorrhea, dysfunctional uterine bleeding, and hypomenstrual syndrome.

Table 1.

Age characteristics of the examined and parity (%)

Age	Main group (n=63)		Comparison group (n=10)	
	Abs	%	Abs	%
20-25 years old	15	38.5	3	30
26-30 years old	16	41.0	4	40
31-35 years old	4	10.3	2	20
36-40 years old	4	10.3	1	10
Average age, years	26.3±0.11		28.5±0.44	
Primiparous	16	41.0	-	-
Multiparous	23	59.0	10	100

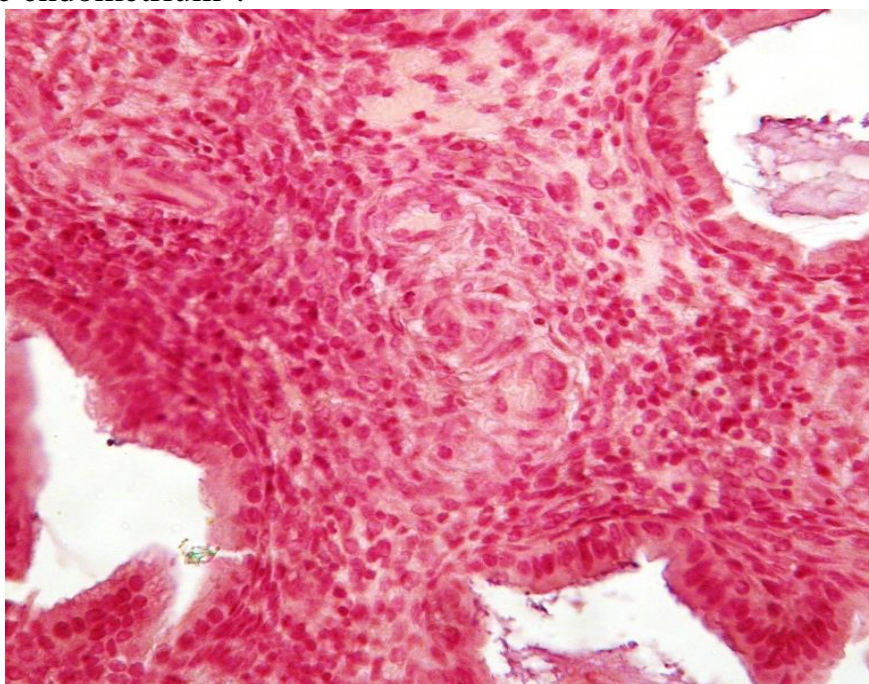
All examined women with APS had a burdened obstetric history (medical abortions, miscarriages, premature births, stillbirths), a high incidence of gynecological complications.

To objectify the state of the endometrium, we conducted a histological examination of scrapings of the endometrial mucosa in 63 women with APS. Generalization of the results of histological examination of the endometrium revealed 3 variants of pathomorphological changes in the endometrium

In variant I - 19 (30.2%) cases - minor areas of degeneration of epithelial cells alternated with areas of normal epithelium of the parietal endometrium. In the uteroplacental region, there were no signs of vasculitis with a uniform development of the walls of the spiral arteries. In the anchor villi, areas of cytotrophoblast were

detected, indicating its full-fledged invasion. This variant was designated by us as "endometrium without pathological changes".

II option - 29 (46.0 %) cases - was characterized by the presence of inflammatory infiltrates in the parietal endometrium with maximum leukocyte infiltration under the uterine epithelium, which indicated an ascending route of infection (Fig. 1). At the same time, there was a concentration of lymphocytes around the uterine glands with severe degeneration of epithelial cells, as well as necrosis of individual decidual cells. In the uteroplacental region, small foci of hemorrhages were noted, along the periphery of which necrosis of the surrounding layers of decidual cells was observed. This option is characterized by us as "inflammatory changes in the endometrium".



Rice. 1. The concentration of lymphocytes around the uterine glands with severe degeneration of epithelial cells, with their nodular proliferation, as well as necrosis of individual scattered highly differentiated decidual cells. The wall of the spiral arteries is unevenly developed.

Stained with hematoxylin and eosin (40×15).

With the 3rd option - 15 (23.8%) cases - against the background of the inflammatory reaction of the parietal endometrium, necrosis of many decidual cells, focal fibrosis of the stroma, occupying significant areas in some cases, was found. In the uteroplacental region, sclerosis of the walls of many spiral arteries was noted, signs of arteritis, superficial trophoblastic invasion was observed, leading to incomplete gestational restructuring of the spiral arteries. This variant of changes in the endometrium, given the presence of destructive changes, is designated as "sclerotic changes in the endometrium".

The study of the anamnesis of women from various subgroups of endometrial changes showed that the group with "unchanged" endometrium consisted of 8 primiparas (42.1%), 11 (57.9%) multiparous had an uncomplicated course of the

postpartum period in the past. Of the 19 women in this subgroup, only 3 (15.8%) had a history of medical abortions.

The second subgroup of the histological picture of the endometrium consisted of 29 women who had relapses of inflammatory diseases of the genital and urinary tract. In the majority (65.5%) of these women, the anamnesis was aggravated by spontaneous miscarriages (31.1%), medical abortions (41.4%). 16 (55.2%) patients from this subgroup were protected from pregnancy by inserting an IUD.

In this way, sclerotic changes in the endometrium against the background of inflammation in the third subgroup were associated with repeated medical abortions in 7 (46.6%), spontaneous miscarriages in 5 (33.3%), non-developing pregnancy in 5 (33.3%), with early preterm birth and perinatal losses in 3 (20.0%) patients, and in the same women there was a combination of several aggravating factors.

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