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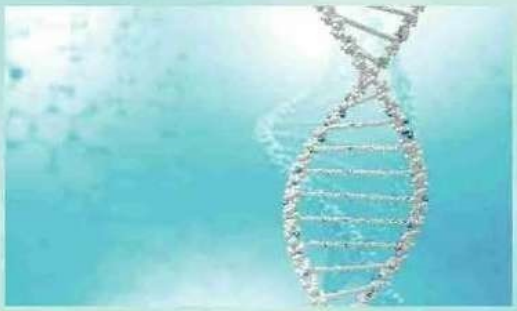

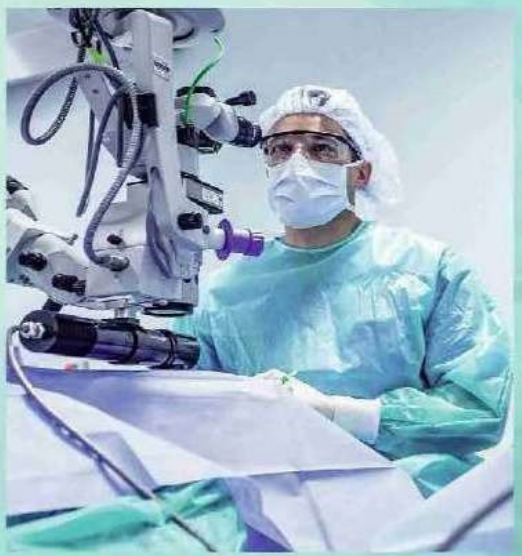

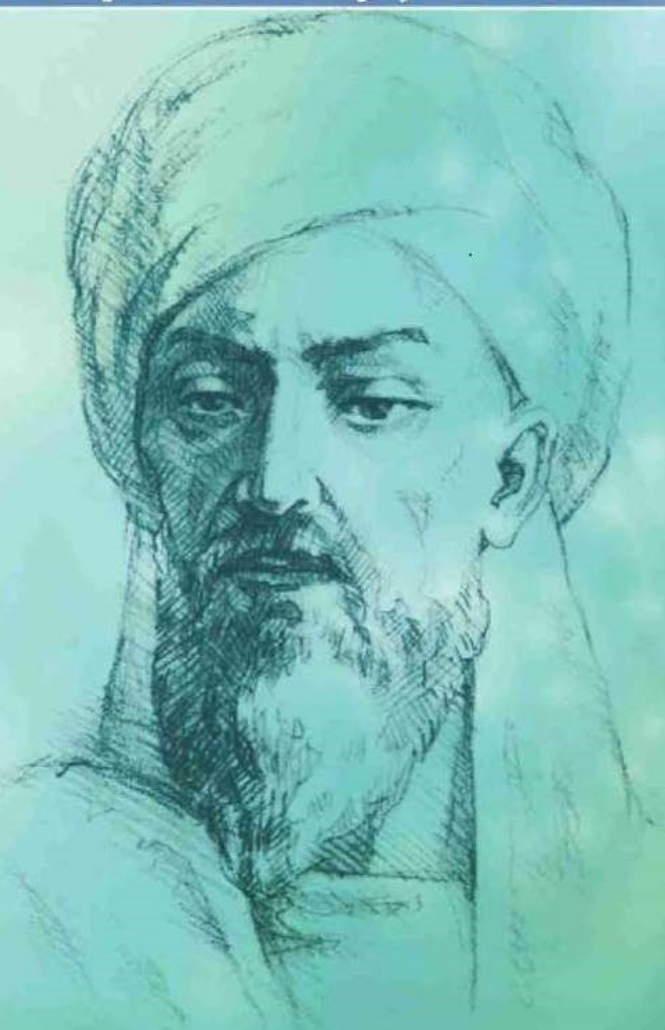

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ТИББИЁТДА ЯНГИ КУН
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NEW DAY IN MEDICINE

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УЧРЕДИТЕЛИ:

БУХАРСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ ИНСТИТУТ
ООО «ТИББИЁТДА ЯНГИ КУН»

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ASSESSMENT OF THE CYTOKINE STATUS OF PREGNANT WOMEN WITH ANTIPHOSPHOLIPID SYNDROME

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✓ ***Resume***

Summary. The multiorgan's of symptoms in some cases causes difficulties in the diagnosis of APS. This is due to the heterogeneity of pathogenetic mechanisms, polymorphism of clinical manifestations, as well as the lack of reliable clinical and laboratory parameters that allow predicting the recurrence of thrombotic disorders.

Keywords: antiphospholipid syndrome, pregnancy, fetal loss

АНТИФОСФОЛИПИД СИНДРОМИ БЎЛГАН АЁЛЛАРДА ЦИТОКИН СТАТУСИНИ БАҲОЛАШ

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✓ ***Резюме***

Антифосфолипид синдроми симптоматикаси полиорганиклиги ташхис жараёнида аксарият ҳолларда ташхис жараёнидаги муаммоларга олиб келади. Бу ҳолат патогенез механизмининг номуаянлиги, клиник кўринишларнинг полиморфизми ва аниқ клиник ҳамда лаборатор кўрсаткичларнинг йўқлиги антифосфолипид синдромининг ташхислаш жараёнини мураккаблаштиради.

Калит сўзлар: антифосфолипид синдроми, ҳомиладорлик, ҳомила нобуд бўлиши

ОЦЕНКА СОСТОЯНИЯ ЦИТОКИНОВОГО СТАТУСА БЕРЕМЕННЫХ С АНТИФОСФОЛИПИДНЫМ СИНДРОМОМ

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✓ ***Резюме***

Полиорганность симптоматики обусловливают в ряде случаев трудности в постановке диагноза АФС. Это обусловлено неоднородностью патогенетических механизмов, полиморфизмом клинических проявлений, а также отсутствием достоверных клинических и лабораторных показателей, позволяющих прогнозировать рецидивирование тромботических нарушений.

Ключевые слова: антифосфолипидный синдром, беременность, потеря плода

Relevance

One of the most important problems of modern obstetrics and perinatology is the problem of miscarriage, which occurs in 10–25% of cases [5,7,11]. Despite the progress in improving modern medicine over the past ten years, there has been a tendency to increase the frequency of spontaneous abortion [1–4,8–10].

With severe autoimmune aggression, a high level of antiphospholipid antibodies that cause vascular damage, primary APS develops, however, more often for the occurrence and implementation of APS, not only significant autosensitization with the synthesis of antiphospholipid antibodies is required, but immunity disorders with an increase in tissue factor, which occur in many diseases [11]. It is important to note that with the threat of abortion, there is an increase in the production of peripheral blood mononuclear cells IL-1 and the expression of the IL-2 receptor in a subpopulation of T cells [5,7,11].

The purpose of the study: to study the features of the cytokine status in women with APS from the early stages of the gestational period.

Material and methods

Given the above, we studied the features of the production of pro-inflammatory cytokines in 38 pregnant women with identified APS (main group), who were under our supervision. The control group consisted of 18 practically healthy pregnant women. In all patients, the blood serum levels of IL-1,6 and tumor necrosis factor were determined by enzyme immunoassay, according to the attached instructions. Statistical data processing was performed using the Microsoft program office Excel 7.0, as well as using Statistica 6.0 application software packages with the calculation of average (M) and relative (P) values, their average statistical errors (m), using parametric and non-parametric methods, t-Student's significance test, followed by determination of the level of significance of differences. Differences were considered statistically significant at $p< 0.05$. Correlation analysis was carried out using Spearman's rank correlation method.

The discussion of the results

During the study, it is noted that the IL-1, TNF indicators in the main group in the first trimester are lower compared to the second and third trimesters ($p < 0.001$), and the IL-6 indicators were not significantly distinguishable by trimester. Whereas in the control group, the tendency to increase in the three trimesters is not significantly different. IL-1 values were 6.8 times higher in the main group than in the control group in the first trimester, 4.3 times in the second and 4.5 times in the third. Data IL-6 in the main group exceeds 6.4 times in the first trimester, and in the II and III trimesters, it was increased by 3.8 and 2.2 times compared with healthy pregnant women. The TNF α values in the three trimesters in the study group are also higher at 4.3; 4.4 and 4.3 times (Table 1).

The indices of cytokines of the main group were significantly different during each trimester, respectively ($p<0.001$).

Noteworthy is the inverse correlation between the level of IL-1, TNFα and the SDO index ($r = -0.40$) of the uterine arteries in women with APS at 28–32 weeks of gestation, which also confirms the negative effect of APS on the development of pregnancy. , which, obviously, is one of the pathogenetic mechanisms of failed pregnancy. An inverse correlation was also found between the average strength of the connection ($r= -0.56$) and the strong connection ($r= -0.70$) between the indicator of IL-1 and LMS of the uterine arteries in the third trimester. It should be noted that the activation of tissue factor in the walls of blood vessels can induce the synthesis of pro-inflammatory cytokines, in addition to the endothelium itself, and by immunocompetent cells that accumulate in the intima. This confirms the position on the role of cytokines in the pathogenesis of the development of APS, which is expressed by an increase in the content of IL-1, IL-6 and TNF in the blood serum of the subjects.

Pro-inflammatory cytokines by us indicates the possibility of their participation in the development of APS. It should be noted that the levels of cytokines remained high even on repeated examination, and the more intense the pathological process, the more pronounced the tendency to increase them. And this is expressed, apparently, by the high receptor activity of the vessels.

Table 1

Interleukin parameters

Options	Main group (n=38)	Control group (n=18)	Reliability
IL- 1 pkg / ml			
I trimester	91.67+12.36	13.34+1.86	p<0.001
II trimester	103.49+18.68	23.11+2.71	p<0.001
III trimester	135.28+21.58	28.98+2.69	p<0.001
IL- 6 pkg / ml			
I trimester	59.74+5.73	9.48+1.27	p<0.001
II trimester	50.55+6.64	12.96+1.50	p<0.001
III trimester	55.6+6.40	23.70+1.28	p<0.001
TNFα pkg / ml			
I trimester	79.06+13.92	17.94+1.49	p<0.001
II trimester	120.1+20.5	27.30+1.26	p<0.001
III trimester	135.24+20.4	30.04+0.68	p<0.001

Conclusions

Based on this, it is noted that for an accurate diagnosis of antiphospholipid syndrome, it is important to evaluate the data on the development of the disease, the main symptoms and laboratory parameters, which allows you to correctly assess the risk of complications and start treatment of the disease in a timely manner. Based on the data obtained, one can judge the possible clinical significance of cytokine levels in the blood serum for the timely diagnosis of APS, which could subsequently prevent the development of obstetric and perinatal complications.

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