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VIOLATION OF THE VAGINAL ECOSYSTEM IS A FACTOR IN MISCARRIAGE IN PREGNANT WOMEN

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Abstract: Bacterial vaginosis occurs when the normal vaginal flora is replaced by opportunistic microorganisms. The disease may be asymptomatic or accompanied by clinical symptoms; A pH above 4.5 and a high number of opportunistic bacteria may indicate bacterial vaginosis. Bacterial vaginosis during pregnancy complicates the underlying disease process and increases the risk of miscarriage and premature birth. Pregnant women diagnosed with bacterial vaginosis are more likely to develop chorioamnionitis and postpartum endometritis.

Key words: Bacterial vaginosis, microflora, premature birth, colpo test, pH meter.

Purpose of the study: To determine the significance of measuring vaginal pH in women with threatened miscarriage.

Relevance. Disruption of the vaginal ecosystem in early pregnancy can be associated with late miscarriage and premature birth, intrauterine and postpartum infections, postpartum inflammatory diseases and unwanted pregnancy. As a result, the number of lactobacilli in the vaginal flora decreases or disappears completely.

The importance of this problem in obstetrics is partly explained by the lack of a specific picture of bacterial vaginosis (BV) in pregnant women and its often asymptomatic course, which makes diagnosing this disease difficult.

Materials and methods of research. The work was carried out in a 3-family clinic in the city of Samarkand. In total, the study included 46 pregnant women who were undergoing outpatient treatment due to the threat of miscarriage. Inclusion criteria: up to 22 weeks, no bleeding at the time of the study, informed consent. Exclusion criteria: period of more than 22 weeks, presence of bloody discharge at the time of examination, multiple pregnancy, uterine malformations, diabetes mellitus, arterial hypertension, cervical insufficiency, HIV, hepatitis B and C, local use of spermicides, antiseptics and antibiotics. All subjects gave informed consent to participate in the study and were familiarized with the purpose and design of the work. Complaints, anamnesis (general and obstetric-gynecological), objective examination data, results of laboratory and instrumental research methods were studied. Particular attention was paid to identifying chronic foci of infection in the genitourinary system (asymptomatic bacteriuria), in other organs and systems, and the use of intimate hygiene products. In all pregnant women, vaginal pH was determined using test strips “Kolpo-test pH” produced by Biosensor AN, Russia. Statistical processing of the obtained results was carried out by the method of nonparametric statistics using the computer program Statistica 6.1. The significance of the differences was determined by calculating Chi square at $p < 0.05$.

Results and discussion. The average age of the patients was 28.9 (from 21 to 39). Of these, 13 (23.2%) were over 30 years old. There were 22 (47.8%) primigravidas, 24 (52.2%) multigravidas (Figure 1), among multigravidas 15 (62.5%) had a history of childbirth.

Multigravidas

A study of vaginal pH showed that various deviations occurred in more than 65% of those examined. Depending on the pH indicators, 3 groups were formed. Group 1 (n=18) included patients with normocenosis, group 2 (n=11) with mycotic vaginitis, and group 3 (n=17) with vaginal dysbiosis. As you can see, almost half of the examined people experienced alkalization of the environment, which

indicates BV. Of these, 10 patients (58.8%) noted the presence of homogeneous watery discharge, and the remaining 7 (41.2%) had no complaints at the time of the examination. This indicated the asymptomatic course of bacterial vaginosis in almost every 3 pregnant women with pH disturbances. Complaints about the appearance of white cheesy discharge, itching and burning were made by 9 pregnant women (81.8%) from group 2.

28 patients had a burdened obstetric and gynecological history (OAHA). Including in group 1 35.8% (n=10), in group 2 – 14.2% (n=4), in group 3 – 50% (n=14). Frequent use of intimate hygiene products was noted in 34. In group 1 - 55.5% (n=10), in group 2 - 72.7% (n=8), in group 3 - 59.3% (n=16). It was noteworthy that 32 women had a history of chronic foci of infection of the genitourinary system.

At the same time, the presence of chronic foci of infection of other organs in the anamnesis was observed only in 17 patients. Including 50% (n=9) from group 1, 45.5% (n=5) from group 2, 11.1% (n=3) from group 3.

In group 1, the majority were patients with grade 3 smear purity. In 2, patients with grade 4 predominated. In 3, the bulk were patients with grade 3 smear purity, significantly fewer patients had grade 4, and only 7.4% had grade 2 smear purity.

A number of studies have been conducted indicating the role of dysbiotic disorders of the vaginal microbiocenosis in the development of the pathology of pregnancy, childbirth and postpartum infectious complications. A recurrent disorder of the vaginal microbiocenosis in a pregnant woman can have a significant impact on the structure of the cervix, causing its asymptomatic shortening, which can subsequently cause premature birth and the birth of premature babies. As an early diagnosis of vaginal microflora disorders, both in outpatient and inpatient gynecological care, the method of determining vaginal pH using test strips can be used. Based on the results of the data obtained, we can say that vaginal pH largely reflects the structure of the vaginal microflora, which depends on factors such as: the presence of chronic foci of infection of the genitourinary system, a burdened obstetric and gynecological history. It is known that women with BV more often use sanitary tampons and panty liners, tight synthetic underwear and thongs, frequent douching and intimate hygiene cosmetics.

An analysis of pregnancy outcomes showed that determining the pH of vaginal discharge in women with miscarriage and at high risk of preterm birth reduced the incidence of preterm birth by 23.3% (from 30.0 to 6.7%). In the control group, where pH testing was not performed, the rate of preterm birth was 19.4% (was 22.2%). The optimal period for screening for intrauterine infections and dysbiotic conditions of the biotopes of the vagina and cervical canal is the 1st trimester of pregnancy. Such “early” screening allows for subsequent safe drug treatment of this pathology in the perinatal period, as well as early prevention of complications of pregnancy and the postpartum period.

Conclusions.

The high frequency of detection of BV among pregnant women with threatened miscarriage dictates the need to include vaginal pH determination in the examination program for threatened miscarriage. This method is easy to use, accessible, and cheap. It can be used as a screening test for early diagnosis of vaginal microflora disorders. Carrying out preventive pH testing of vaginal discharge will allow timely detection of signs of vaginal dysbiosis and adequate correction of identified disorders.

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