TREATMENT OF UROGENITAL INFECTIONS DURING PREGNANCY

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Annotation: Urogenital infections (UGI) remain one of the urgent problems of obstetrics and gynecology. During gestation, UGI can cause complications such as chorioamnionitis, delayed intrauterine development and intrauterine and intranatal infection of the fetus, spontaneous miscarriages, premature birth, purulent-septic complications in the postpartum period. According to the literature, UGI in pregnant women is highly common and often occurs in a latent form, complicating their timely diagnosis and subsequent treatment.

Key words: urogenital infections, bacterial vaginosis, pregnancy

The etiological factor of urogenital infections (UGI) during pregnancy is most often caused by such microorganisms as ureaplasma, mycoplasma, streptococcus, Escherichia, klebsiella, chlamydia, gonococcus, etc. In more than 10% of cases, the disease is caused by associations of anaerobic and aerobic microorganisms [1-5]. In their daily practice, obstetricians and gynecologists most often encounter such nosologies as bacterial vaginosis (BV) (from 20-45% of cases), candidiasis vulvovaginitis (20-25% of cases) and trichomoniasis (10-15% of cases) [4, 6-9].

CANDIDAL VULVOVAGINITIS

The incidence of candidal vulvovaginitis reaches 35% among pregnant women, and among patients with endocrine pathology it can be up to 60%. Frequent exacerbations of chronic ACNE during pregnancy are caused by special immunological conditions that ensure a state of temporary partial local immunodeficiency. The primary role is played by a decrease in the ability of the pregnant woman's immune system to timely recognize and destroy the invading infectious agent. An imbalance of the components of innate immunity at the local level in the epithelial cells of the lower genitourinary tract leads to the development and subsequent chronic persistence of UGI [1, 6, 10]. The causative agents of urogenital candidiasis are fungi of the genus Candida, which are unicellular opportunistic microorganisms belonging to the class Aerobes belong to the Cryptococcaceae family of the Deuteromycota class of imperfect fungi, since they do

not have sexual reproduction forms and sexual spores [1, 11]. The first diagnostic criteria during pregnancy are vivid clinical manifestations: abundant curdled leucorrhoea, pasty and hyperemia of the mucous membranes of the vulva, vagina, cervix, and external opening of the urethra, in most cases not accompanied by subjective complaints [7, 12]. Depending on the state of vaginal microcenosis, two forms of vaginal candidiasis infection are distinguished: true candidiasis, in which fungi act as a monococcator (a high concentration of fungi is combined with a high concentration of lactobacilli), and a combination of candidal vulvovaginitis and BV, in which fungi participate in microbial associations (fungi vegetate with an overwhelming predominance of obligate anaerobes). Candidiasis is not a pathology due to the presence of fungi in healthy women, however, a microbiological examination in the vaginal discharge reveals yeast-like fungi in small amounts (<104 CFU/ml) in the absence of pseudomycelia in most cases [2, 7]. During diagnosis, medical history, complaints, clinical manifestations, and laboratory test results are evaluated. The main diagnostic methods are microbiological research methods, the diagnostic value of which reaches 95% [6, 8].

The study of Gram smears allows us to additionally determine the total number of microorganisms and the ratio of different bacterial morphotypes in the studied material. With the help of cultural research The data determine the generic and specific affiliation of fungi, their sensitivity to antimycotic drugs, and it is also possible to identify and identify the accompanying flora. The polymerase chain reaction (PCR) method can be used to diagnose candida vulvovaginitis as a highly sensitive and rapid method of isolating the pathogen in the case of a chronic recurrent form of the disease, as well as in case of suspected Candida non-albicans infection.

BACTERIAL VAGINOSIS

The incidence of BV ranges from 10 to 21% during pregnancy and has continued to increase in recent years [10, 11]. BV is a polymicrobial disease. The primary causative agents of BV are considered to be anaerobic bacteria – Gardnerella vaginalis, Atopobium vaginae, Prevotella spp., Mobiluncus spp., Mycoplasma hominis, etc., the concentration of which increases several times and reaches 1010 CFU/ml. An increase in the number of aerobic and anaerobic bacteria with a predominance of the latter explains the name bacterial, and the absence of an inflammatory reaction from the vagina (absence of leukocytes) – vaginosis [13]. The diagnosis of BV is based on data from clinical and laboratory research methods. The "gold diagnostic standard" in the detection of BV is the detection of 3 of the 4 criteria proposed by R. Amsel. Diagnostic criteria These include: homogeneous vaginal discharge, a pH of more than 4.5 in the vaginal discharge, a positive amine test, and the presence of "key" cells in Gram-stained vaginal discharge smears. The pathognomonic criterion is the detection of "key cells" [4]. They are detected by bacterioscopy of the vaginal contents in almost 90% of women with BV. The next

simple and affordable method for diagnosing BV is a positive amine test.: the appearance of a "fishy" odor when potassium hydroxide is added to the vaginal secretions. The Nugent point diagnostic system has also been developed for the diagnosis of BV. This system is based on an estimate of the number of bacteria (lactobacilli, Gardnerella, and mobiluncus) in a Gram-stained smear [14, 15]. The diagnosis of BV is based on an integrated assessment of vaginal microbiocenosis with the determination of the lactobacillus titer and the exclusion of mixed infections involving BV, which includes microscopy of a Gram-stained smear and a culture study.

TRICHOMONAS COLPITIS

Trichomoniasis (synonym: trichomoniasis) – this is a widespread infection of the genitourinary organs with sexual transmission. The disease is caused by the flagellated protozoan microorganism Trichomonas vaginalis. The characteristic clinical symptoms of trichomonas colpitis include vaginal discharge (36.7%), itching in the genital area (25.5%), dysuric phenomena (32.7%), pyelonephritis (20.4%), threatening miscarriage (36.7%). The signs of trichomoniasis in women are nonspecific. These same symptoms may be present in a number of other genital infections. These include: itching in the genitourinary organs, urination disorder (increased frequency, soreness), pain during sexual intercourse, and the presence of vaginal discharge. Secretions usually have a yellow-green or whitish color, an unpleasant odor, and a foamy character. Foaming is related to the ability of trichomonads to produce carbon dioxide. Sometimes trichomoniasis can be accompanied by pain in the lower abdomen. An important symptom of trichomonas infection is a shift in the pH of vaginal secretions to the alkaline side (usually an acidic environment in the vagina).

Trichomoniasis in women often occurs simultaneously with another infection or against the background of vaginal dysbiosis. The confusion of symptoms complicates diagnosis. It must be remembered that about 50% of women with trichomonas infection do not present any complaints and do not observe any symptoms of the disease at all. There is scientific evidence indicating that the development of trichomoniasis in pregnant women may increase the risk of premature birth, early discharge of amniotic fluid, and low fetal body weight. The exact causes of this phenomenon are unknown. It is believed that the occurrence of complications in pregnant women suffering from trichomoniasis is associated with higher levels of pro-inflammatory cytokines 1 and 6, as well as tumor necrosis factor [5]. Light microscopy of vaginal smears is most often used to detect trichomonads. At the same time, the doctor looks into a microscope, examining the smear for the presence of moving microorganisms. The method has serious drawbacks. Its sensitivity is 50-70%. The informative value of microscopy drops sharply if the smear is examined more than 15 minutes after sampling the material. Since the method is based on a

direct examination, it is more effective in women whose bodies are undergoing massive growth. the awakener. The non-detection of trichomonads by microscopy does not indicate their absence. The advantage of light microscopy is its "proximity to the patient." In many cases, an accurate diagnosis can be made already in the doctor's office and treatment can begin immediately [5]. In the diagnosis of trichomoniasis, especially its asymptomatic forms, the culture method is used (cultivation of colonies of the pathogen in special media). The culture method is more sensitive than microscopy, but it takes much longer. The diagnostic scheme for trichomoniasis also uses the PCR method to determine the presence of trichomonad genetic material in the human body. PCR has a fairly high sensitivity of 84%.

TREATMENT of vaginitis caused by the combined effects of two or more pathogenic factors ranges from 10 to 30%, according to various authors. The presence of mixed forms of infection makes it difficult to diagnose and treat the disease. If the wrong treatment strategy is chosen, the frequency of relapses and reinfection increases, which is especially dangerous during gestation. Refusal to treat UGI during pregnancy leads to the persistence of infection, an increase in the frequency of possible complications, the addition of superinfections, and intrauterine infection. During pregnancy, dynamic bacteriological and virological monitoring and smear microscopy are necessary to determine the appropriate management tactics for the patient. During pregnancy, the primary choice in treatment is the appointment of drugs for topical use. The choice of the drug should be based on the duration of pregnancy and its clinical efficacy. Due to the fact that pregnant women are potentially excluded from clinical trials for ethical reasons, there is no evidence for their effectiveness and safety during pregnancy for most drugs. [6, 9, 12, 18]. It is necessary to prescribe medicines to pregnant women according to strict indications only if the expected benefit exceeds the possible risk to the fetus, using medicines with established safety and long-term experience in pregnant women, and in the minimum effective doses. If possible, it is recommended to avoid prescribing drugs in the first trimester of pregnancy [1, 6, 7]. The effectiveness of UGI treatment is largely determined by the accurate identification of the pathogen, the appointment of etiotropic therapy and the good acceptability of the drug; the use of a single dosage form for the treatment of candidal, bacterial and trichomonas infections is a very valuable treatment option. The second stage of therapy involves the stimulation of normal vaginal lactoflora through the use of biological bacterial preparations – eubiotics and probiotics.

NEO-PENOTRAN FORTE One of the variants of a single form of a drug for the treatment of vaginitis is the Neo-Penotran Forte vaginal suppositories. The drug is a combination of two effective standard drugs widely used for the treatment of mixed vaginitis: metronidazole at a dose of 750 mg and miconazole nitrate at a dose of 200 mg. Metronidazole is a broad–spectrum antimicrobial drug with high activity

against protozoa (trichomonads, giardia, dysentery amoeba) and obligate anaerobic bacteria (sporo- and non-spore-forming). It has a selective bactericidal effect against those microorganisms whose enzyme systems are capable of restoring the nitro group. Metronidazole is not active against aerobic bacteria and fungi. However, this disadvantage in the preparation Neo-Penotran Forte is eliminated due to the presence of miconazole nitrate in its composition, which inhibits the growth of dermatomycetes, yeast and other pathogenic fungi, also having a bactericidal effect on some Gram-positive bacteria (the mechanism of action is to inhibit the biosynthesis of ergosterol, an essential component of the membrane and plasma membranes of fungi and some bacteria). Miconazole nitrate is not detected in blood plasma during vaginal administration, which indicates its exclusively local effect. It is important to emphasize the optimal combination of doses of active ingredients. An increase in the content of metronidazole by 7 times compared with the drug containing metronide dasol 100 mg + miconazole 100 mg significantly enhances its antimicrobial activity without increasing the risk of systemic reactions, since the bioavailability of metronide sol with intravaginal administration is 20% compared with oral administration [14, 18], and with such administration of metronidazole tablets, the dose is 250-750 mg 4 times a day (i.e. concentration The blood concentration of metronidazole during its intravaginal administration is about an order of magnitude lower than when metronidazole is taken orally in tablet form).

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