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Research Article

Bacterial Vaginosis: Comprehensive Rehabilitation

Savickaya VM*

Educational Institution "Belarusian State Medical University", Minsk, Belarus

***Corresponding Author:** Savickaya VM, Educational Institution "Belarusian State Medical University", Minsk, Belarus.

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Abstract

This article is devoted to an urgent problem in obstetrics and gynecology - complex sanitation of bacterial vaginosis. The article deals with the consequences of this pathology, leading to the emergence of severe pathology of the female genital organs, as well as complications of pregnancy and childbirth. Much attention is paid to the second stage of vaginal sanitation, namely the restoration of lactobacillary flora.

Keywords: Bacterial Vaginosis; Sexually Transmitted Infections; Lactobacilli; Naerobic Microorganisms; Dysbiotic Process, Key Cells

Introduction

Bacterial vaginosis is a clinical condition that is not related to inflammatory diseases of the vagina, as well as sexually transmitted infections. The vaginal secretions are normally dominated by peroxide-producing lactobacilli, which provide the main defense mechanism by competing with more pathogenic microorganisms. In bacterial vaginosis, the normal vaginal microflora, represented mainly by lactobacilli, is replaced by other microorganisms, the main in the manner of anaerobes. Normally, the average number of microorganisms in the vaginal secretion for aerobes and anaerobes is 10^5-10^6 CFU/ml. It is important to note that in healthy women, aerobic flora prevails in relation to anaerobic flora (10:1) [2,4]. ICD 10 - «Other non-inflammatory diseases of the vagina» N89.

An increase in the number of aerobic and anaerobic bacteria with a predominance of the latter explains the name bacterial, and the absence of leukocytes (cells responsible for inflammation) explains vaginosis.

The reasons for this ecological change in vaginal microbiocinosis have not been sufficiently studied, it is assumed that genital hygiene, the state of local and general immunity, endocrine changes, genetic factors, as well as frequent use of antibiotics are important [2]. In addition, it was revealed that 83% of patients have food, medication and mixed allergic reactions, indicating a decrease in some adaptive mechanisms and the immune system. Since 55% of women had intestinal dysbiosis, we can talk about a single dysbiotic process in the body with a dominant manifestation in either the genital or digestive systems.

A distinctive feature of the disease is the absence of any one specific pathogen. The microflora that replaces lactobacilli can be different and is most often represented by opportunistic bacteria. The acidity of the vaginal environment shifts towards alkalization. When the vaginal ecosystem is disturbed, a well-structured polymicrobial film (biofilm is a form of microbial communities) is formed, covering the vaginal epithelium and consisting of anaerobic bacteria, which leads to a recurrent course of bacterial vaginosis [5]. In biofilms, bacteria are protected from components of innate and acquired immunity. They maintain the constancy of the oxygen-rich acidic pH environment and play the role of local protection factors. In case of violation of protective mechanisms,

pathogenic or opportunistic microorganisms of transient or facultative flora attach to the cells of the vaginal epithelium, followed by reproduction and tissue damage.

The frequency of this pathology depends on the contingent of women examined. In the structure of inflammatory diseases of the female genital organs of reproductive age, the frequency of bacterial vaginosis is 40-60%, in pregnant women - 20-25% [1,3,6].

The aim of the study was to study the prevalence of bacterial vaginosis, the effectiveness of sanitation and prevention of this condition.

Materials and Methods of Research

We analyzed 670 outpatient records, of which the sample of our study at the outpatient stage was 60 non-pregnant women aged 18 to 43 years with an established diagnosis of bacterial vaginosis according to Amsel's criteria.

Results

In our study, the age of the examined women ranged from 18 to 43 years and averaged 29.2 ± 1.1 years. In the analysis of mass-growth ratios in the examined women, deviations from population norms were not revealed, the average body weight was 69.3 ± 1.7 kg, the average height was 166.8 ± 0.4 cm. When collecting an anamnesis of life, extragenital pathology was detected in 19 examined women.

All 60 women complained of discharge from the genital tract. Complaints about smell were in 70% of women, discomfort in the external genital area in 73.3% of women (Figure 1). On physical examination, all women had pathological vaginal discharge before treatment, all had a positive amine test, the pH of vaginal discharge was 5.5 - 7.4.

Microbiological examination of the vaginal discharge revealed the following results: single leukocytes (1-3 in the field of view of the microscope), the presence of «key cells», and the absence of lactobacilli.

In our study, the treatment of bacterial vaginosis was aimed at eliminating anaerobic bacteria and preventing ascending infection of the internal genital organs. Traditionally, drugs that suppress

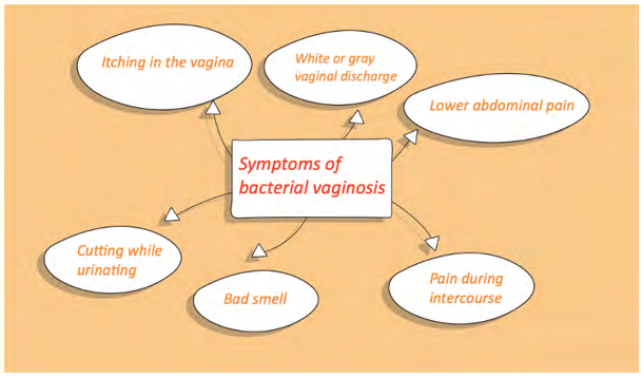

Figure 1: Symptoms of bacterial vaginosis.

anaerobic microorganisms are used to treat bacterial vaginosis, so we used 2% vaginal cream in the treatment of Clindamycin. However, often (in 30-40% of cases) such treatment is ineffective, the elimination of anaerobic bacteria, the subsequent restoration of normal lactobacillary microflora of the vagina and the normalization of the clinical picture of the disease do not always occur, this was taken into account by us. In our study, a two-step method was used to treat bacterial vaginosis. At the first stage, anaerobic microflora was eliminated with the help of nithroimidazoles, and at the second stage, normal lactobacillary microflora was restored with the help of lactobacillary preparations.

During the treatment, all patients were divided into two groups. The first group, consisting of 30 people, received standard therapy in the form of the drug «Clindamycin» 2% vaginal cream at night for 7 days in combination with the use of intimate hygiene product «Vidermina prebiotic», which has an acidic environment with a pH of 3.5 - 2 times a day for 14 days. The second group, consisting of 30 people, received only standard therapy in the form of the drug «Clindamycin» 2% vaginal cream at night for 7 days.

The active ingredient «Vidermina prebiotic» («Heminova International S.A.», Madrid, Spain) is glycyrrhizic acid activated by 0.1 g. Excipients - propylene glycol, tween - 80 (polysorbate - 80), purified water, enriched with α-gluco-oligosaccharide, lactic acid and panthenol, helps to restore the balance of lactobacillary flora.

Observation of the examined patients was carried out during 3 visits (visits): before the start of treatment, on the 7th and 14th

days from the start of treatment. The effectiveness of therapy was assessed by the presence or absence of complaints from patients, by assessing the objective clinical symptoms of the disease, by assessing laboratory parameters, such as the number of leukocytes, the presence of key cells, the qualitative and quantitative composition of the vaginal microflora during microscopic and bacteriological studies. In addition, the amine test and pH level were evaluated.

On the 7th day from the start of treatment, complaints of heavy discharge were noted in group I in 13.3% of women, in group II – in 30.3% of women. Complaints of unpleasant odor remained in 3.7% of women of group II. In connection with the above complaints, the course of treatment has been extended to 14 days.

During the clinical examination of women on the 14th day from the start of treatment, pathological discharge was noted in 5% of women of group II. Therefore, the second stage of treatment was prescribed probiotics to restore the vaginal microflora.

One of the main signs of bacterial vaginosis is the appearance of key cells that are visible on microscopic examination of vaginal discharge in the form of squamous epithelium cells with a mass of bacteria adhered to the surface. Prior to treatment, key cells were identified in all patients. In the first group of women on days 7 and 14 of therapy, key cells were not detected in any case. The dynamics of the presence of key cells on the 7th and 14th days of therapy in group II was as follows: 4.4%, 1.7% respectively.

On the 7th day from the start of therapy, quantitatively during microscopic examination, lactobacilli prevailed in 54.3% of women, and on day 14 – in 76.2% of women of group I. In the second group of women, lactobacilli prevailed in 27.6% of women on day 7, and in 32.2% on day 14.

To date, it has been established that bacterial vaginosis is not only the cause of unpleasant discharge, but also a risk factor, and sometimes one of the causes of severe pathology of the female genital organs and complications of pregnancy and childbirth. Studies by many authors [1,2,3,7] have shown that bacterial vaginosis leads to various complications. In gynecological practice - to endometritis, salpingoophoritis; inflammatory complications after surgery and invasive procedures, as well as colpitis and neoplastic processes of the cervix; infertility (low redoxy potential of tissues and high pH), and in obstetric practice - to chorioamnionitis, postpartum endometritis, premature birth, birth of children with low body weight.

As a result of our research, it was found that the vaginal route of treatment of bacterial vaginosis is not inferior in effectiveness to oral therapy. This method of therapy is more preferable, since with local application, the drug is introduced directly into the niche colonized by pathogens, which achieves high efficiency in the use of small doses of the antimicrobial drug, and on the other hand, it excludes systemic effects on healthy tissues and reduces the possibility of developing systemic adverse reactions. These advantages allow the use of topical treatment in pregnant and lactating women.

At the same time, with all of the above methods of treatment, relapses may occur at different times after treatment. This is due to the fact that, eliminating opportunistic microorganisms, there are often no conditions for a fairly rapid recovery of lactobacilli. In this regard, the complex treatment of bacterial vaginosis included the intimate hygiene product «Vidermina prebiotic» and eubiotics within 10 days after the main course of treatment, due to their specific action aimed at restoring the normal ratio of lactobacilli in the vagina and thereby preventing the frequency of recurrence of this disease. Due to this, in a shorter period of time, with complex therapy, the unpleasant smell of vaginal discharge stopped, Patients' complaints about discomfort in the vaginal area disappeared, the pH value of vaginal discharge and the presence of «key» cells in them decreased faster. Lactobacilli are extremely important: they have an antimicrobial effect against pathogenic and opportunistic flora, stimulate acquired immunity, participate in the digestion process, the synthesis of vitamins K and group B, create an acidic environment, promoting the development of bifidobacteria and other representatives of normal microflora, improve lactose tolerance.

Conclusion

The biggest problem in the rehabilitation of bacterial vaginosis is to choose the sanitation scheme that would allow the woman to either cure or create conditions for remission. In these cases, it is necessary to turn to the possible causes of vaginosis,

because during therapy it is important first of all to eliminate the causes of pathology. In short, bacterial vaginosis is a problem in gynecology that is almost the key in developing an understanding of the whole The layer of obstetric and gynecological pathology is a fairly common disease of the vaginal ecosystem, requiring timely diagnosis, comprehensive and adequate therapy.

The results of our treatment give reason to recommend the intimate hygiene product «Vidermina prebiotic» for inclusion in the complex treatment regimens of bacterial vaginosis in both pregnant and non-pregnant women, which he the microecology of the vagina.

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