

INFLAMMATORY DISEASES OF THE PELVIC ORGANS IN WOMEN

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Abstract. *The medical, social and economic importance of the problem of inflammatory diseases of the pelvic organs requires very careful attention to the diagnosis and treatment of this pathology.*

Keywords: *gardnerella vaginalis, escherichia coli, mycoplasma hominis, urea plasma urealyticum.*

In the first decade of the XXI century, the incidence rate of inflammatory diseases of the pelvic organs increased 1.4 times in patients aged 18-24, and 1.8 times in 25-29-year-old [13]. At the same time, the costs of diagnosis and treatment have increased, which reach 50-60% of all expenses for providing gynecological care to the population. In most cases, sexually active women of childbearing age suffer from IT, which has an extremely adverse effect on their reproductive health in the future. One in four women who have had a stroke subsequently have complications such as infertility, Inflammatory diseases of the pelvic organs are a consequence of the spread of microorganisms from the lower parts of the female genital organs to the upper ones and can be presented in various forms: endometritis, salpingitis, oophoritis, which can be treated on an outpatient basis, as well as parametritis, tuboovarial abscess, pelvioperitonitis, which require mandatory hospitalization in a hospital.

The main role in the emergence and maintenance of the inflammatory process in a woman's genitals is played by an infectious process associated with various microorganisms [4, 5, 9, 21, 22]:

- Chlamydia (*Chlamydia trachomatis* – 30%) and gonococcal (*Neisseria gonorrhoeae* – 40-50%) flora;
 - aerobic gram-positive bacteria of the genera *Staphylococcus* (in 53-56% of cases) and *Streptococcus* (33%);
 - conditionally pathogenic flora (*Gardnerella vaginalis*, *Escherichia coli*, *Mycoplasma hominis*, *Urea plasma urealyticum*), which occurs in isolation or in associations with other microorganisms (10-15%);
 - anaerobic bacteria (18%), are more common.

The role of mix infection has increased, i.e. bacterial-viral – a combination of mycoplasma, urea plasma infection with herpes simplex virus type 1 and type 2, cytomegalovirus, Epstein-Barr virus and human papillomavirus, HIV-associated inflammatory diseases of the pelvic organs are isolated [6]. It should be noted that the process is often chronicled as a result of the absence or late diagnosis of the disease, incorrectly and/or untimely prescribed antibacterial therapy, inadequate concomitant therapy.

- surgical interventions on the pelvic organs, especially invasive interventions in the uterine cavity (abortions, diagnostic curettage, endometrial biopsies, hysteroscopy, hysterosalpingography, insemination, in vitro fertilization – IVF);
- the presence of sexually transmitted infections, including in the anamnesis;

- a large number of sexual partners, frequent their change;
- absence of barrier methods of contraception;
- decreased endocrine function of the endocrine glands (ovarian diseases of different nature, menopause, obesity, diabetes mellitus);
- omission or prolapse of the genitals, gaping of the genital slit;
- menstruation (blood and rejected endometrium are a good nutrient medium, therefore about 60% of acute infections begin immediately after menstruation);
- intrauterine contraceptives. In modern conditions, inflammatory diseases of the pelvic organs have some features that significantly distinguish them from the clinical picture of diseases 20 years ago:
 - rare development of classical forms of the disease; • erased clinical picture of both acute and chronic stages of the disease;
 - predominance of predominantly chronic processes, and recently the appearance of primary chronic diseases; • persistent recurrent course chronic processes;
 - the most frequent localization of the inflammatory process in the appendages of the uterus;
 - rare damage to the parametrial fiber;
 - rare development of purulent processes.

Classifications of Inflammatory diseases of the pelvic organs [21, 22]:

1. According to the clinical course:

- acute;
- subacute;
- chronic (in remission or exacerbation).

2. By localization:

- inflammation of the external genital organs – vulvitis and Bartholin's glanditis;
- inflammation of the internal genital organs – colpitis, vaginitis, cervicitis, endometritis and metro endometritis, pan metritis and peri metritis, salpingitis, oophoritis or salpingo-oophoritis (or adnexitis), hydrosalpinx, piovars, parametritis and pelvioperitonitis.

Diagnosis of inflammatory diseases of the external genital organs does not present any difficulties and is based on the data of anamnesis, examination, scrapings and smears. Therefore, they require closer attention to diagnosis and adequate treatment. In the diagnosis of inflammatory diseases of the internal genital organs, the following data attract attention:

- anamnesis (the presence of a previously suffered inflammatory process in the appendages of the uterus after abortion, complicated course of labor, postpartum and postoperative periods, intrauterine procedures, hypothermia);
- clinical symptoms (soreness in the lower abdomen, inguinal areas, sacrum, vagina, increasing during cooling, intercurrent diseases, before or during menstruation); symptoms of intoxication (body temperature above 38 ° C, leukocytosis, a change in the leukocyte formula with a shift to the left, increased ESR and C-reactive protein), pathological discharge from the genital tract, menstrual dysfunction by type of ovarian hypofunction and anovulation; violation of sexual functions (painful coitus, decreased or absent libido, etc.);
- transvaginal ultrasound examination of the pelvic organs (endometritis and metro endometritis; pan metritis and peri metritis; salpingitis, oophoritis or salpingo-oophoritis (or adnexitis); hydro- and pyosalpinx, piovar, parametritis and pelvioperitonitis);

- laparoscopic and hysteroscopic (+ HSG) research methods in doubtful cases to clarify the diagnosis (endometritis and metro endometritis; pan metritis and peri metritis; salpingitis, oophoritis or salpingo-oophoritis, or adnexitis; hydro- and pyosalpinx, pyovar, parametritis and pelvioperitonitis);

- cultures for opportunistic flora and PCR diagnostics from the vagina, cervical canal, microscopy of smears from the vagina, cervix and urethra (colpitis, vaginitis; cervicitis and endocervicitis);

- pipel biopsy and/or hysteroscopy on days 7–11 of the menstrual cycle with histological examination of endometrial biopsy (endometritis and metroendometritis). It should be noted that chronic endometritis (CE) is currently identified as a separate nosological form in the International Statistical

Classification of Diseases, Injuries and Causes of Death, IX revision in 1975. In the International Statistical Classification of Diseases and Related Health Problems, X revision, CE consolidated its position [18]. The frequency of CE in women with recurrent miscarriage varies widely: from 33 to 70% or more. According to T.V. Strizhova (2012), the morphological signs characteristic of CE is the most common. Of course, the emergence of new antibacterial drugs ensures better clinical effectiveness and the absence of antibiotic resistance. When managing patients with PID, you should remember: “The golden rule of antibacterial therapy is that the best drug should not be reserved for more severe cases, the best drug should be the drug of choice in all situations.”

According to the experience of domestic and foreign colleagues, the use of monotherapy has an advantage over combination therapy due to higher patient adherence to treatment. Currently, for the treatment of PID in monotherapy, the use of only moxifloxacin, a fourth-generation fluoroquinolone, which is active against the main pathogens of PID, is recommended [28, 29]. Monotherapy with Avelox at a dose of 400 mg once a day for 14 days is comparable in clinical and bacteriological effectiveness to combination therapy for uncomplicated PID, and is also much better tolerated and causes fewer side effects from the gastrointestinal tract than combination therapy [28, 29]. When treating with Avelox, there is no need to use nitroimidazole derivatives, since it is active against atypical bacteria and anaerobes [19]. Moxifloxacin is comparable in activity against anaerobes to metronidazole [19]. After the use of antibacterial therapy in the management of patients with PID, it is necessary to carry out rehabilitation, the main goal of which is to restore the morpho functional potential of the tissue and eliminate the results of secondary damage: correction of metabolic disorders and the consequences of acidosis, restoration of hemodynamics in the tissues. But we must remember that rehabilitation must be long-term and controlled. Traditionally, physiotherapy is used in the complex treatment of CE. The most commonly used are electric pulse therapy, interference currents, low-frequency alternating magnetic fields, supra-tonal frequency currents, low-frequency ultrasound and cavitated liquids (antiseptics), intravenous laser irradiation of blood, acupuncture, system-wide magnetic therapy, and peloid therapy.

Treatment of PID in women should be comprehensive and include [20, 28]:

- broad-spectrum antibiotics or taking into account sensitivity when identifying an infectious agent;

- ant anaerobic drugs (metronidazole, ornidazole, course 10 days);

- antimycotics: imidazole derivatives (miconazole, ketoconazole, itraconazole, clotrimazole, econazole, butoconazole), triazole derivatives (fluconazole, itraconazole, voriconazole) [32];
- antiviral drugs, abnormal nucleotides (acyclovir, valacyclovir), vaccines;
- local combination drugs (Neopenotran, Terzhinan, Polizhinaks) or antiseptics (Hexicon, Betadine);
- physiotherapy at the rehabilitation stage (electrophoresis with zinc, magnesium, laser therapy, magnetic therapy, acupuncture, ozone therapy).

Therapy of bacterial infections involves the prescription of broad-spectrum antibiotics that penetrate well into the site of infection. Since more than 80% of all urogenital infections are mixed, it is necessary to include antianaerobic drugs in complex treatment. When candidiasis develops during the use of antibiotics, it is necessary to prescribe antifungal drugs. The most commonly used drugs are fluconazole at a dose of 150 mg twice. In the presence of a viral infection, depending on the clinical picture, antiviral drugs are used, the need for which in the treatment of patients with chronic infectious processes has been proven. It is known that the effectiveness of antibiotics, antiviral drugs and antifungal agents in people with reduced anti-infective immunity is much lower. The basis of basic antibacterial therapy should be broad-spectrum antibiotics with a high ability to penetrate cells [33].

These requirements meet:

- combinations of the latest generation macrolides and nitroimidazoles (josamycin 500 mg 3 times a day for 10 days + metronidazole 500 mg 3 times a day for 14 days);
- protected penicillin's with macrolides (amoxicillin/clavulanic acid 1000 mg 2 times a day + clarithromycin 250 mg 2 times a day);
- second generation fluoroquinolones with nitroimidazoles (ofloxacin 400 mg 2 times a day + metronidazole 500 mg 3 times a day);
- IV generation fluoroquinolones (moxifloxacin 400 mg once a day);
- III generation cephalosporins (if gonococcal infection is suspected, ceftriaxone 0.5 g intramuscularly once). It is advisable to start treatment from the 1st day of menstruation. The duration of use is on average 10–14 days.

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