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THE ROLE OF IMMUNOGLOBULINS IN THE TREATMENT OF MALIGNANT BACTERIAL AND VIRAL INFECTIONS FOUND INSIDE THE UTERUS

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Abstract:

It is known in medicine that intrauterine infectious diseases are one of the main types of gynecological pathology. This article discusses the treatment of uterine infections in women of reproductive age and the effect of immunoglobulin in the treatment.

Keywords: Infection, diagnosis, patient, immunoglobulin, method, intrauterine

INTRODUCTION.

Intrauterine fetal infections are a group of infectious and inflammatory diseases of the fetus and young children, which, especially at the moment, are of great practical importance due to high mortality and the development of profound disability. The presented material describes in detail the pathogenesis, clinic, differential diagnosis and treatment of various intrauterine infections.

The degree of negative impact of background uterine diseases on a woman's reproductive health depends significantly on the state of local and systemic immunity, as well as on the impact of external agents, incl. infectious. The most significant contribution is made by a combination of viral and bacterial infections, especially recurrent and repeatedly treated. It should be noted that over the past 15–20 years, the proportion of diseases of viral, chlamydial, mycoplasmal etiology and their combinations (associated and monoinfections) has increased sharply against the backdrop of success in the fight against bacterial and protozoal infections. According to WHO, more than 300 million cases of urogenital infections (UGI) caused by sexually transmitted infections (STIs) are registered annually in the world, in general, STIs cause 40–60% of all inflammatory pathology of the urogenital tract in women, with This significantly disrupts the state of vaginal microbiocenosis, causing abundant growth of opportunistic flora [11]. At the same time, it should be noted that chronic infection occurs in 50–70% of cases [9].

MATERIALS AND RESEARCH METHODS.

In cases where infection occurs in the embryonic period, spontaneous miscarriages or severe, life-threatening malformations occur more often. Penetration of the pathogen into the body of the fetus in the early fetal period can lead to the development of an infectious-inflammatory process, characterized by the predominance of the alternative component with the formation of fibro-sclerotic deformities in the damaged organs. Infection of the fetus in the late fetal period can be accompanied by inflammatory damage to both individual organs and systems (hepatitis, carditis, meningitis or meningoencephalitis, chorioretinitis, damage to hematopoietic organs with the development of thrombocytopenia, anemia, etc.), and generalized damage. In general, with antenatal infection, the clinical symptoms of the disease, as a rule, appear already at birth.

The main feature of chronic diseases of the genitourinary organs caused by these infections, the causative agents of which were not previously considered pathogenic, is an erased character, hidden carriage.

The nosological profile of UGI is represented by such diseases as urogenital herpes, chlamydia, ureaplasmosis and other infections. Despite the sharp difference in the biological properties of pathogens (viruses, chlamydia, mycoplasmas, ureaplasmas), they all cause diseases of the human genitourinary sphere, which makes it possible to conditionally combine them according to their clinical characteristics into a single group and, based on the data obtained, propose various highly effective specific methods of treatment and prevention.

The main prognostic feature of these infections is the formation of unstable immunity, so they can be observed. repeated reinfections and relapses

leviations that occur in a clinically unexpressed form.

Among gynecological patients with inflammatory diseases of the genitals, their viral nature was established in 25.4% of cases. Genital herpes infection was detected in 16.8%, chlamydial urogenital infection in 21.8%, cytomegalovirus infection in 8.6% of cases [9, 10].

The study was conducted at the RSNPMCAG, in the department of fetal medicine. A prospective controlled study was conducted, 7 pregnant women

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with a gestational age of 26-35 weeks admitted to inpatient treatment for polyhydramnios.

The purposeful interest shown in the course of this work in patients with underlying uterine diseases in combination with STIs is due to the fact that, according to large-scale studies of recent years, it has been shown that the vast majority of patients suffering from various forms of underlying uterine diseases have STDs. So, the overall frequency of uterine damage in chlamydia is 49-53%, and in some groups of patients it can exceed 90% [1].

Modern ideas about the relationship between various types of diseases of the uterus are reflected in modern classifications of diseases of the female genital organs, incl. in the International Statistical Classification of Diseases (ICD-X, 1992), updated by the International Association of Uterine Pathology and Colposcopy in Barcelona, 2003, in the International Nomenclature of Diseases 1996, in the Histological Classification of Tumors (HCT) of the female reproductive system. system, 2nd edition 1994.

Etiopathogenesis of the main diseases of the uterus and UGI

The most common causes of benign pathological processes of the uterus are birth or abortion-related trauma (rupture and eversion of the uterus), infections, less often - hormonal disorders.

Currently, the most popular concept is the primary development of immunological disorders, and, as a result, the onset of an infectious process. The results of modern research indicate the participation of infectious and immunological factors in the formation of the pathological process in the uterus. The infection is dominated not only by bacteria and fungi of the genus Candida, but also by the herpes simplex virus, chlamydia, ureplasma, mycoplasma. A decrease in immunological protection causes the activation of not only pathogenic, but also conditionally pathogenic flora. The role of viruses in the development of malignant degeneration of the uterine epithelium has been proven [3, 4, 5].

The specificity of UGI in background diseases of the uterus lies in the mutual influence of even latent carriage on the predisposition to infection with other infections. Some pathogens can create favorable conditions for the penetration, persistence and reproduction of other microorganisms. Thus, a relationship was found between gonococcal infection and infection with M hominis and U. urealyticum. Colonies of mycoplasmas and ureaplasmas grow, as it turned out, on the surface of colonies of gonococci. An electron microscopic study confirmed the close relationship of gonococci with the ureaplasma membrane. The possibility of mutual influence of U. urealyticum and Gardnerella vaginalis is noted. With significant frequency, ureaplasma and chlamydia are simultaneously isolated. Ureaplasma infection can be accompanied by inflammatory processes of the genitals, leading to infertility, miscarriage, premature birth, prenatal pathology of the fetus, and also cause urethritis, prostatitis, and infertility in men [13]. An additional aggravating factor is resistance to traditional therapy, both for background diseases of the uterus, and with a combination of UGI.

More complex is the relationship between underlying uterine diseases and viral infection, incl. herpetic infection, HPV, Epstein-Barr virus, molluscum contagiosum. Thus, HPV is in first place in terms of frequency of occurrence among viral STIs and is considered as the leading factor in carcinogenesis [4]. However, a necessary cofactor for the manifestation of the carcinogenic effect of HPV is a violation of the microecology of the vagina, as a result of which the immunological potential decreases. HPV is characterized by a long course without severe clinical symptoms, a high probability of recurrence after treatment, but at the same time there is a small probability of spontaneous remission. In general, pathological conditions associated with HPV can be divided into 2 groups - clinical forms characterized by exophytic growths of the skin and mucous membranes (genital warts), and subclinical forms in which epithelial tissues are damaged without causing exophytic growth (various histological varieties of flat condylomas , cervical intraepithelial neoplasia of all degrees of severity). HPV has 100 types differing in DNA structure, 75 of them are fully cloned and fully sequenced. Among the 30 types of HPV affecting the anogenital area, there are high and low oncogenic risk.

The time interval from infection of the uterus with HPV and the appearance of a tumor is from 5 to 20 years and depends on a number of cofactors that accelerate oncogenesis. The main co-factors have been established. They are smoking and associated UGI pathogens - HSV-P, CMV, chlamydia, ureoplasma, mycoplasma, Trichomonas, HPV 16/18 [15].

Diseases of the uterus in most cases are asymptomatic, and only in relatively rare cases, patients complain of contact bleeding, leucorrhea, itching, pain, which are most often due to the presence of a secondary infection. Such complaints are found in many diseases, their presence or absence is determined by the prevalence of the pathological process, changes in the uterus, concomitant gynecological diseases. At the same time, the patient's complaints are very "delayed" in comparison with the development of the disease [15].

UGI caused by mixed infection are clinically more severe, longer, and various complications often occur against their background. Mixed infections are not always observed in a manifest form. They can give a wide variety of clinical symptoms, which will create

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difficulties in the clinical study of infectious pathology. A mixed viral-bacterial infection can be characterized as a complex process of interaction between two or more pathogenic agents and the host organism [1, 2].

Diagnosis of genital infection is carried out in several stages. Data from anamnesis and clinical examination can only indicate a possible infection with various infectious agents, and laboratory diagnostic methods are of paramount importance. The methods of laboratory diagnostics include the following: cultural, serodiagnostics, DNA-specific methods, cytological. Each method has its advantages and disadvantages, but of all methods, the culture method and polymerase chain reaction attract special attention, primarily due to their high sensitivity and specificity. At present, it is highly advisable to use two different diagnostic methods for more accurate verification of UGI and the validity of subsequent therapeutic measures [15]

To confirm the diagnosis and clarify the phase of the disease, it is recommended to use methods for detecting antibodies to the pathogen in the blood serum: the reaction of indirect immunofluorescence RNIF, microimmunofluorescence, as well as ELISA and recombinant genus-specific lipopolysaccharide ELISA. The use of the latter method is especially important in case of ascending and persistent infection, which maintains the chronic course of the disease for several months, and even years, and thereby damages or destroys tissues and organs [9].

The state of the microbial ecology of the host plays an important role in the occurrence of spontaneous and induced malignant neoplasms. Resident and transient microflora, metabolizing endogenous and exogenous substrates, contributes to the formation of carcinogens, promoters of tumor development or precursors. It is assumed that carcinogens and promoters are formed during the microbial transformation of procarcinogens present in the atmospheric air, water, and food. 7-alpha-steroid dehydrogenase, 7-alpha-dehydroxylase. The significance of microorganisms in the formation of N-nitros compounds with a carcinogenic effect has been established. The precursor of N-nitrosamines are nitrates. Their metabolism is carried out by bacterial nitrate and nitrite reductases, which are the most active under aerobic conditions. They are produced by hemophilic bacteria propionobacteria, clostridia, eubacteria, arachnia, veillonella, bacterioids, and actinomycetes [6].

There is a connection of chlamydial infection with malignant tumors, with the development of uterine dysplasia. It is assumed that the causative agent of chlamydia can be a bacterial cofactor contributing to the progression of neoplastic processes [17]. During colposcopic examination of patients with chlamydial cervicitis, ectopia with diffuse erythema of the cylindrical epithelium on the vaginal part of the uterus is most often determined. In smears-imprints from the uterus, signs of inflammatory atypia of epitheliocytes and puncture of the cytoplasm with microvacuoles are revealed.

In an experimental study of animals with transplantable tumors obtained against the background of an experimental chlamydial infection, it was found that both chlamydial infection and transplanted tumor lead to unidirectional changes in the functional activity of T-, B- and NK-links. immunity. However, it was in the groups of animals subjected to combined action that the maximum inhibition of the functional activity of T cells occurred, which was due to a violation of the processes of their differentiation, as well as a significant suppression of the functional activity of the NK link [16]. Treatment of a malignant neoplasm associated with chlamydial infection requires the use of anti-chlamydial treatment along with antitumor therapy [8]. Studies of the last decade have established that immunodeficiency is an essential component of a viral infection, which affects the severity and outcome of the disease. This makes it necessary to combine the etiotropic treatment of these diseases with the correction of immunological defects associated with them using cytokines.

Complex therapy of background diseases of the uterus

According to the generally accepted opinion, the treatment of underlying diseases in combination with UGI should be etiotropic, pathogenetic and symptomatic.

Modern methods of therapy for underlying uterine diseases include systemic and local treatment aimed at both suppressing the pathogen (antibiotic therapy) and restoring local immunity of the mucous membranes (laser therapy) and inducing immune responses at the body level (immunotherapy). The greatest prospects are characterized by immunomodulatory therapy, which allows both to stimulate the immune response and to suppress individual immune responses. [3, 12].

Immunotherapy for underlying uterine disease has clear advantages. Domestic authors focus on domestic preparations of polyoxidonium, KIP-feron, neovir, etc. [13], while foreign authors focus on preparations of recombinant interferon (intron).

There are objective difficulties in conducting and selecting pathogenetic therapy for UGI in combination with background diseases of the uterus. Inadequate use of antibacterial drugs, as well as their use against the background of immunosuppression caused by background diseases of the uterus, can lead to the formation of persistent infections and relapses of the disease [9]. The possibility of developing resistance to

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etiotropic drugs has been established in chlamydia, trichomonas, ureaplasmas, mycoplasmas, fungi and other pathogens that cause inflammation of the genital organs. Herpes simplex viruses show thymidine kinase resistance of virus strains to nucleoside analogues: acyclovir, valaciclovir, and penciclovir-famciclovir [5, 9, 11]. It has also been established that dysbacteriosis and features of cytokine synthesis in the body can play an important role in the occurrence of chlamydia persistence [2]. Massive antibiotic therapy often contributes to the growth inhibition and disappearance of the resident flora and to a lesser extent affects the pathogenic microflora. As a result, antibiotic-resistant strains and persistent forms of pathogenic microorganisms are formed, which leads to the emergence of latent, hidden forms of the course of inflammatory processes, chronic infection and certain difficulties in diagnosis.

Analyzing the literature data, we can conclude that the treatment of major uterine diseases should be comprehensive and should be directed to several links of pathogenesis, incl. to eliminate inflammation, eliminate the pathogen, correct hormonal disorders. At the first stage, etiotropic anti-inflammatory therapy is carried out according to indications. The next stage of treatment is aimed at various links in the pathogenesis of the disease itself and the corresponding complications. At present, drugs with pathogenetic action, which have therapeutic effects through the physiological regulation of pathological processes in the body, are finding wider use in the clinic. A promising direction in this area is topical cytokine therapy. In essence, cytokines are universal mediators of intercellular interactions; those molecules with the help of which the cells of the immune system and other body systems "communicate" with each other. The biological role of these regulatory peptides is undeniable in the development of a wide range of pathophysiological processes: tissue damage and inflammation, on the one hand, repair and regeneration, on the other, regulated by cytokines [12].

Cytokines have such properties as pleiotropy, cascading, synergism and antagonism, which in each specific case leads to the unique regulation of intercellular interactions during the development of a particular process. Thus, the strength of the use of cytokine therapy is the physiology, at the same time, the effect of cytokines on the pathogenesis of various diseases. A striking example is the immunomodulatory action of these peptides: in case of insufficiency of cell activation mechanisms, which may be due to an imbalance in the production of cytokines, the use of cytokines as a therapeutic agent leads to an increase in the functional activity of cells of the immune system, and vice versa in case of hyperactivity these cells, an additional dose of cytokines causes the normalization of their activity. Naturally, such an action justifies the use of cytokines in a wide range of diseases.

The immunotropic drug Superlymph is a standardized complex of cytokines, among which the activity of interleukins (IL-1, 2, 6), tumor necrosis factor- - (TNF- -), phagocyte migration-inhibiting factor (MIF), transforming growth factor (TGFr). The complex composition of the drug not only makes it possible to expand the scope of its application, but again brings its action as close as possible to the physiological one, since in the body the regulatory effect of cytokines on target cells is determined not by an individual molecule, but by their composition. The main mechanism of action of superlymph is associated with the activation of phagocytic cells, fibroblasts and increased interactions between these cellular elements. The drug stimulates phagocytosis of macrophages and eutrophils, their production of reactive oxygen and nitrogen species, production of their own cytokines by cells, regulates their migration, activates antitumor cytotoxicity and promotes the death of intracellular parasites. At the same time, superlymph regulates the functional activity of fibroblasts, their synthesis of collagen and glycosaminoglycans. Under the influence of exogenous cytokines, the tissue's own cytokine background changes, which induces an influx of mainly mononuclear phagocytes into the focus, and therefore the inflammatory reaction becomes local and less pronounced. An increase in the functional activity of macrophages contributes to a faster resorption of decay products and an increase in reparative processes with a complete restoration of the defect without the formation of rough scars.

Superlymph is used in the treatment of diseases of various etiologies, accompanied by inflammation and impaired repair, and on the other hand, in the treatment of inflammatory diseases, accompanied by the development of local immunodeficiency.

RESULTS AND ITS DISCUSSION.

Received immunotherapy - Bioven (IG 5g). The drug is administered intravenously drip, at an initial rate of 0.5 - 1 ml / min, for 15 minutes (15 drops / min), then 1 ml / min - 15 minutes (20 drops / min), then injected at a rate of 1.2 -1.5 ml/min (25-30 drops/min). if well tolerated, administration is carried out at a rate of 1.5 ml / min. (30 drops/min).

All patients underwent intrauterine interventions: amnioreduction. An examination of the amniotic fluid revealed a viral infection. The influence of viral infections was revealed during ultrasound studies, in the form of expansion of the lateral

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ventricles from 11-19 mm, finely and coarsely dispersed amniotic fluid.

Despite the availability of numerous methods of treatment, relapses of background processes of the uterus remain at a high level. These diseases, as a rule, are accompanied not only by systemic immune disorders, but also by defects in immune processes in the mucous membranes and tissues of the reproductive tract of women. Based on the foregoing, it is timely to develop comprehensive methods for the treatment and prevention of background processes in the uterus.

REFERENCES

1. Abakarova P.R., Ledina A.V. // Pathology of the uterus in urogenital chlamydia. Clinic, diagnosis, treatment./ Pathology of the uterus, genital infections No. 1–2004– P. 50–57.
2. Ankirskaya A. S. // Bacterial vaginosis. // Zh. Obstetrics and gynecology. - 2005. - No. 3. - P. 10–13.
3. Apolikhina I.A. // Papillomavirus infection of the genitals in women./ ed. IN AND. Kulakova: M.–Geotar-med.2002.–111p.
4. Bashmakova M.A., Savicheva A.M.// Papillomavirus infection//Methodological guide–M.–2003–14 p.
5. Bykovskaya O.V. / Ureaplasma infection and the state of the uterus // Journal Pathology of the uterus and genital infections. - 2004. - v.1, No. 1. – P.47–49.
6. Vikha G.V. / Clinical and experimental substantiation of the development of test systems for the detection of stress-dependent markers to study the mechanisms of adaptation of the organism in extreme situations. // Abstract. dis. doc. biol. sciences.–2002.–48p.
7. Gomberg M.A. // Persistence of chlamydial infection. Clinical and morphological characteristics, immune mechanisms of development, therapy, (Clinical-lab.-electron, microscope, research). - Dis. Dr. med. nauk.–M.–2003.–241 p.
8. Guskova N.K., Zlatnik E.Yu., Smirnova L.A. and others / Indicators of cellular immunity as a reflection of the potentiating effect of experimental chlamydial infection on the nervous system in rats // Allergology and Immunology.–2000.–V.1, No. 2.–p. 215–221.
9. Dmitriev G. A. Laboratory diagnosis of bacterial urogenital infections. – M.: Medical book. - 2003. - 331 p.
10. Zemskov A.M., Zemskov V.M., Sergeev Yu.V. and others // 1000 formulas of clinical immunology, ed. A.M. Zemskova, V.M. Zemskova - M. -2003.-p165.
11. Kisina V.I. Inflammatory diseases of the pelvic organs in women and their relationship with sexually transmitted infections, Part 1. etiology, pathogenesis, (literature review). // Vestn. dermatology and venereology. -2002. - Number 3. – P.25–30.
12. Kovalchuk L. V., Suppression of the cytopathic action of the herpes simplex virus type 1 by a complex of natural cytokines in vitro. Journal of microbiology, epidemiology and immunobiology. 2005. - No. 1. - p. 57–60.
13. Kozlova V.I., Pukhner A.F. // Viral, chlamydial and mycoplasmal diseases of the genitals. Guide for the doctor. - St. Petersburg. - 2000. - 574 p.
14. Kondrikov N.I. Modern classifications of diseases of the uterus. Diseases of the uterus, vagina and vulva (Clinical lectures). Ed. Prof. V.N. Prilepskaya. - M., MEDpress-inform, 2005, - p. 20–25.
15. Kostava M.N. Cryodestruction and diathermocoagulation of benign diseases of the uterus // Diseases of the uterus, vagina and vulva (Clinical lectures). Ed. Prof. V.N. Prilepskaya. - M., MEDpress-inform, 2005, - p. 169-177.
16. Shirinkinkina N.V. // Factors of natural resistance, indicators of the immune response and tactics of immunocorrection in experimental chlamydial infection. Abstract diss. Candidate of Medical Sciences - Perm - 2003. - 22 p.