



Inflammatory diseases of urinogenital organs: nonconventional methods of diagnostics.

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At the moment the rate of inflammatory diseases in the female sexual sphere is sufficiently increased and the infectious aetiology, too; this is a socially significant phenomenon, it results first of all in the reduction of fertility, it is a certain danger to potential sexual partners and is connected with direct and indirect expenses for treatment. The reduction of the birth rate and of the life quality, regarding the women particularly, is a direct result of infectious - inflammatory diseases of urinogenital system, too [1].

The most frequently reason of inflammatory diseases of genitals is gonococcus, trichomonas, clamidia, herpes, micoplasma infection, the urinogenital candidiasis, etc. When meeting the patient at the antenatal clinic the doctor-gynecologist must find out the anamnestic data, first of all, examine the patient (colposcopy, microcolposcopy) and take the biomaterial for further examinations, including the bacteriological ones. The treatment of specific infectious-inflammatory diseases can be basically carried out by a powerful antibiotics-therapy first of all, and the sexual partner must be treated, too; the treatment must be conducted under a strict control of the attending physician looking after the results of the bacteriological parameter analysis. If the forms of diseases are complicated and demonstrated ones, and if the aeradication of the activator is not completed, it is indicated, that the patient has to go to hospital, to a specialized clinic and in some cases the patient must have aftercare at a specialized preventive clinic or at sanatoria and health resorts.

The accuracy of the activator detection is very important for a successful treatment of infectious urinogenital organs diseases. The methods of laboratory diagnostics existing now are not perfect ones. Each method has its advantages and lacks [5, 6]. Therefore, if the result is positive, it does not mean yet, that the disease is present.

On the basis of our medical centre a group of patients having various infectious-inflammatory diseases (clinically established) in urinogenital spheres (men and women, 174 persons in all) have been examined with using of "Biolas-Oberon" hardware and software complex [2, 3,4]. The results of the nonlinear analysis (NLS-diagnostics of viruses and microorganisms) we have got when using the "Biolas-Oberon" diagnostic complex (tab. 1), have been compared to the results of traditional methods of the laboratory diagnostics which has been carried out in specialized laboratories. For checking one has used the methods of activator's antigens detecting (IFA-immunoenzyme analysis, the DIF - a direct immunofluorescence), methods of



DNK-activator detecting (**DNK-DIAGNOSTICS**), including the PCR - polymerase chain reaction.

Table 1.

Detectability of the infectious agent at patients having their infectious - inflammatory urinogenital system diseases (% of the general number of diseases in the subgroup).

Activator	Methods of diagnostics			
	NLS	IFA	PIF	PCR
STREPTOCOCCUS AGALACTIA B	95 %	100 %	91 %	96 %
CYTOMEGALOVIRUS	91 %	97 %	88 %	90 %
NEISSERIA GONORRHOEAE	95 %	99 %	90 %	93 %
CHLAMIDIA TRACHOMATIS	92 %	97 %	89 %	95 %
MYCOPLASMA HOMINIS	93 %	98 %	87 %	91 %
BACTERIUM LACTIS AEROGENES	95 %	98 %	93 %	94 %
UREAPLASMA UREALITICUM	96 %	99 %	91 %	97 %
ENTEROCOCCUM FAECIUM	100 %	100 %	93 %	95 %
CANDIDA ALBICANS	100 %	100 %	92 %	97 %
STREPTOCOCCUS HAEMOLYTICUS A	100 %	100 %	93 %	95 %
STAPHILOCOCCUS AUREUS	100 %	100 %	93 %	98 %
ESCHERICHIA COLI	100 %	100 %	95 %	96 %
VARICELLA - ZOSTER	98 %	100 %	90 %	93 %
TREPONEMA PALLIDUM	96 %	99 %	89 %	96 %
HUMAN IMMUNEDEFICIENCY VIRUS	93 %	99 %	90 %	95 %

From the table it is visible, that the accuracy of the of NLS-diagnostics method is comparable to others modern highly specific methods of detecting the microorganisms and viruses, it concedes to the immunoenzyme method of analysis a



little, but in some cases it brings more information than the methods of polymerase chain reaction and of the direct immunofluorescence.

All above-stated methods of traditional diagnostics demand certain time from the moment the biological material has been taken to the getting of the results (from several hours to two days), the expensive equipment and account materials.

The doubtless advantage of the method of nonlinear analysis with using the "Biolas-Oberon" software and hardware complex is the speed of examination (10 to 30 minutes if there is a combination of several activators), the possibility to do examinations not only at specialized medical offices but at home, too. The using of this method allows to enhance the percent part of the detected infections of urinogenital organs and, accordingly, to prevent the development of complications resulting in barrenness and in various obstetrical pathologies. It is also necessary to emphasize that the method is uninvasive, and that's why the iatrogene diseases are completely excluded.

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