

*Materials of Conferences***RISK FACTORS OF INTRAUTERINE FETAL INFECTION**

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There were investigated 200 pregnant women with a high risk of intrauterine fetal infection maternity department of the Andijan regional perinatal center. The gestation time is 28–40 weeks.

High risk factors of intrauterine infection (IUI), which have diagnostic value, in addition to having a maternal history of chronic somatic diseases and inflammatory diseases of the female reproductive organs, were second pregnancy, complications during pregnancy with this threat of termination, obesity, anemia, acute respiratory infections.

Clinical high risk factors of IUI of newborns were moderate and severe conditions in the first day, degeneration of the skin and its derivatives, morphofunctional immaturity, regurgitation syndrome, impaired neonatal adaptation.

There was a significant relationship of the intrauterine infection of different etiology (enterovirus, herpes simplex virus, cytomegalovirus, influenza virus) with a history of maternal chronic disease (71,6%), miscarriages and stillbirths (41,5%), and such complications of pregnancy, as the threat of termination of pregnancy (37,6%), exacerbation of chronic disease (77,5%).

We have identified the fact that there hotbeds of acute or chronic infection in the history of women with intrauterine infection of the fetus, on the one hand, indicates the lack of specific immunological defense mechanisms and non-specific factors of resistance in the mother, and the other, is evidence of the existence of persistent infection. The main pathogenetic mechanism of disorders of the fetus is infectious factor. In the group of women with a high risk intrauterine infection fetoplacental insufficiency occurred in 35,2%. Infectious-inflammatory diseases of pregnancy adversely affect all parts of the fetoplacental complex. Infection of the ovum is often accompanied by abortion or subsequent delay in fetal development.

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**THE SURFACE TENSION EXPERIMENTS AT THE DIAGNOSIS OF ASYMPTOMATIC NEUROSYPHILIS**

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Analysis of the clinical features of modern syphilis in Ukraine reveals two significant tendencies: on the one hand, the cases of infection with malignant

course have become more frequent, on the other hand, the number of patients with latent forms of the disease has increased. The neurosyphilis (NS) is the lesion of the nervous system caused by a syphilitic infection, and results in specific changes of the liquor cerebrospinalis (cerebrospinal fluid, CSF). The NS diagnostics can be complicated because the syphilitic process in the nervous systems can either be asymptomatic or do not exhibit any clear clinical indications [1]. The traditional methodology used in the initial diagnostics of NS is based primarily on data obtained from the serologic studies of blood and CSF.

Clinical and anamnestic features of 33 patients with asymptomatic neurosyphilis (AN) were analyzed. The majority of the patients belong to a reproductive and able-bodied population. In 60% of the cases under study AN develops against the background of syphilis sustained earlier and treated with repository medicine of penicillin. Subjective symptoms are characterized by an asthenoneurotic syndrome in 70% of the cases.

Parameters of liquor in 33 patients with AN have been investigated. The average amount of cellular composition in the liquor was 20.3 cells/mm<sup>3</sup>. Pleocytosis (more than 8 cells/mm<sup>3</sup>) was observed in 57% patients. 10 person – had 20 cells in liquor with maximum amount 100 cells in mm<sup>3</sup>. The average level of protein was 0,16 gr/l, which is in line with the norm. Concentration of protein in liquor higher than 0,4 gr/l is one of the diagnostic criteria of NS. In our research only 14,5% of the patients examined had the level of albumen higher than the norm. The index of Pandi reaction was 1,5. A negative VDRL reactions made up 58% and highly positive results were observed only in 32% patients. The most informative parameter of NS diagnosis is an immunofluorescence reaction with integral liquor. The positive reaction was observed in 56% and highly positive – in 44% of patients. In this case the probability of a correct final diagnosis is between 30 and 70%. Therefore, the development of new highly informative methods for the study of CSF is of high interest for the diagnostics of this pathology.

The chemical composition of CSF is quite similar to that of blood serum: water, 89–90%; solid residues, 10–11%. The solid residues contain both organic (proteins, amino acids, hydrocarbons, urea, glycoproteins and lipoproteins) and inorganic substances. Most of the organic substances are surfactants; this fact makes it possible to employ dilational rheology studies of the CSF for NS diagnostics.

Presented below are the results obtained by the examination of 63 patients with NS and syphilis. The first group consisted of 33 patients suffering from AN, without any neurologic symptoms, but with positive syphilitic tests and changes in the clinical analysis of CSF. The reference group consisted of 30 syphilitic patients without any accompanying neurologic diseases.

The surface tension experiments were performed using the drop/bubble profile analysis tensiometers PAT2 (SINTERFACE Technologies, Germany). In this study the pendant drop configuration was used. The temperature of the measuring glass cell was controlled at 25 °C [2].

In the process of comparing tensiometric and rheologic characteristics a number of authentic distinctions were revealed: reduction of the level of a stress viscoelasticity module and surface-tension, increase of tangent of slope angle and time of relaxation in a stress experiment in patients with asymptomatic neurosyphilitic. A correlation analysis has been carried out between clinical, serum and tenziometrical indices.

The following results have been obtained at patients with AN: reverse correlation dependence between stress visco-elasticity modulus and pleocytosis – (–0,7), with protein (–0,6); direct correlation with immunofluorescence reaction (0,9). Direct correlation dependence between FTA and time of relaxation (0,6), reverse correlation (–0,5) with surface-tension, as well as reverse correlation (–0,5) between the tangent of maximum angle of slope tenziometric line and content of protein.

The dependencies discussed above show the applicability of the studies of the CSF dilatation rheology for the diagnostics of the neurosyphilis and subsequent differential diagnostics of the concomitant diseases. A value of  $a_1$  above 40 mN/m undoubtedly indicates the absence of nervous system pathologies for the syphilitic patients. If this value is lower than 32 mN/m it can be concluded that the syphilis is accompanied by neurologic diseases, mainly a discirculator or toxic encephalopathy.

The values of the parameters  $a_1$ ,  $a_2$  and  $b_1$  which describe the dilatation rheology at the harmonic oscillations of the drop area, exhibit essential differences ( $p < 0,1$ ) between the group of patients and the reference group. The significant differences ( $p < 0,05$ ) were observed in the  $a_1$  values (the elasticity at the frequency 1 rad/s) for the patients from first and reference group. It should be noted that a strong correlation ( $r = 0,9$ ) exists between the values of  $a_1$  and  $E$  (stress modulus) for groups of patients. This is just what should be expected, because these parameters refer to different method of dilatation rheology studies (stress and harmonic deformation) both involving a quite small contribution of the imaginary constituent into the surface visco-elasticity.

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#### PROTECTING REPRODUCTIVE HEALTH OF YOUTH

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The article presents an evaluation and operational experience of «Youth-friendly clinics» that have been organized in Russia according to a program of the International organization of healthcare in collaboration with infantry fund of UN (UNICEF).

Demographic situation in Russia remains unfavourable in both quantitative (decrease in population) and qualitative (decrease in expected life period, demographic aging) meanings. A high death rate, drop of birth level and natural decrease in population in Russia (since 1992) are defined by a negative impact of economic and social factors that have obtained a stable long-term nature. Increase reproductive behavior of the country does not change and if one-child family remains a prevailing type of Russian families, grave forecasts that predict death of Russian nationality as an ethnos can become scary realistic (A.E. Ivanova, 2008, V.I. Starodubov, L.P. Sukhanova, 2012, O.G. Frolova and others, 1999). The explained facts define the significance of preserving reproductive health of the youth.

A great number of models, aimed to assist a teenager, exist in the world: from separate actions of doctors-specialists to narrow-specialized clinics or centers that provide complex medical and social services to the young. In order to generalize the existing information and experience the International organization of healthcare (IOH) in collaboration with population funds of UN (UNFPA) and Infantry funds of UN (UNICEF) has developed joint program on creating youth-friendly clinics (YFC) in 1995 (T.N. Kozhukhovskaya, L.M. Aliyeva, 2012).

A «youth-friendly clinic» (YFC) is an institution that provides complex medical, psychological, and social assistance to teenagers on problems of preserving health according to the following principles: voluntariness, affordability, amicability, and trust. Over 130 YFC have been created in Russian Federation by now.

Within YFC the consultations of the following doctors-specialists have been organized: obstetrician-gynaecologist, urologist-andrologist, legal adviser, social adviser.

YFC provide the following free services:

– Phone consultation with specialists or direct consultation in a clinic;