

CONDITION OF NON-SPECIFIC PROTECTION FACTORS OF ORAL CAVITY AMONG PREGNANT WOMEN

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Conditions of non-specific resistance factors of oral cavity among the pregnant who live in different ecological-geographic terms of Uzbekistan have been studied. It has been established that a number of lymphocytes in oral fluid doesn't alter reliably among the pregnant of Khoresm region, compared to the nonpregnant, and among the pregnant of Tashkent region it increases reliably. Concentration of sIgA among the pregnant of Khoresm region decreases reliably along the pregnancy terms, and this indicator increases among the pregnant of Tashkent region.

Keywords: non-specific resistance factor, pregnant women, oral cavity, ecological-geographic term

Non-specific resistance factors form the basis of local immunity of a man's oral cavity. They carry out a barrier function and protect an organism from different pathogenic and conditionally-pathogenic microorganisms [1, 2, 4, 6].

Studies have shown that quantitative and qualitative decrease in activity of immune system take place in among pregnant women, including non-specific resistance factors [3, 5, 8].

It is known that immune status of a man is negatively affected by different exogenous factors, including those ecologically-unfavourable, to which we refer water, soil, climate, and atmospheric factor [5, 7].

Due to it the objective of our research was studying conditions of factors of non-specific resistance of oral cavity among the pregnant who live in different ecological-geographic conditions of Uzbekistan.

Materials and methods of research

We have studied pregnant women who live in Khoresm region ($n = 63$), that is referred to an ecological-

ly-unfavourable region of the Aral pool. For comparison we have studied the pregnant of Tashkent region ($n = 54$) as an ecologically-favourable region. 15 nonpregnant women of each region have formed control groups. Age structure of the studied (16–49 years) was equal in all groups, a comparative analysis of the results was carried out according to age and terms of pregnancy.

The method of simple radial immune-diffusion (Manchini, 1964) was used to define a concentration of sIgA in saliva. Definition of lysozyme in saliva was carried out via method of K.A. Kagramanova and Z.V. Ermoliyeva (1966), modified by A.M-T. Bektimirov and S.K. Adylov (1990). To define cellular structure of oral fluid we used the method, introduced by L.E. Leonidov and co-authors (2002).

Results of research and their discussion

The obtained results shows us that a number of lymphocyte in oral fluid among the pregnant of Khoresm region did not alter reliably. However, in the III term, compared to the I term of pregnancy, a reliable decrease in lymphocytes was registered (Table), besides, in the III term a reliable decrease in monocytes, compared to the control group, was registered.

Parameters of non-specific resistance factors of oral cavity among the pregnant who live in different ecological conditions

| Terms | Research location | Lymphocytes, % | Monocytes, % | Neutrophils (rod-core), % | Lysozyme, titre | sIgA, g/l |
|--------------|-------------------|-----------------|-----------------|---------------------------|-----------------|-------------------|
| Non-pregnant | Khoresm | $1,5 \pm 0,3$ | $2,8 \pm 0,1$ | $3,0 \pm 0,2$ | 1:72 | $0,53 \pm 0,03$ |
| | Tashkent | $1,1 \pm 0,2$ | $2,7 \pm 0,1$ | $2,5 \pm 0,3$ | 1:64 | $0,49 \pm 0,02$ |
| I term | Khoresm | $2,1 \pm 0,4$ | $2,7 \pm 0,2$ | $3,4 \pm 0,4$ | 1:65 | $0,46 \pm 0,05$ |
| | Tashkent | $1,3 \pm 0,1$ | $2,6 \pm 0,2$ | $2,9 \pm 0,2$ | 1:75 | $0,55 \pm 0,02^*$ |
| II term | Khoresm | $1,3 \pm 0,1$ | $2,3 \pm 0,3$ | $3,6 \pm 0,5$ | 1:105* | $0,42 \pm 0,04^*$ |
| | Tashkent | $1,9 \pm 0,1^*$ | $2,1 \pm 0,2^*$ | $2,8 \pm 0,3$ | 1:115* | $0,68 \pm 0,01$ |
| III term | Khoresm | $1,1 \pm 0,3$ | $1,8 \pm 0,2^*$ | $3,3 \pm 0,5$ | 1:162* | $0,39 \pm 0,07^*$ |
| | Tashkent | $2,0 \pm 0,2^*$ | $2,5 \pm 0,4$ | $3,5 \pm 0,3^*$ | 1:166* | $0,71 \pm 0,01^*$ |

Note: * – reliability in relation to the data of non-pregnant

Obviously, a decrease in number of lymphocytes and monocytes shows us a deficit in main factors of non-specific resistance of oral cavity among the pregnant, and revelation of neutrophils level within the limits of norm shows some preservation of an organism's pro-

tective forces against conditionally-pathogenic microorganisms.

While defining lysozyme titre and the level of sIgA in oral cavity among the pregnant of the I term, no reliable differences, compared to the non-pregnant were registered. However, in the

II term or the II term of pregnancy lysozyme titre has increased reliably ($p < 0,01$), and the level of sIgA has decreased ($p < 0,05$).

A number of lymphocytes among the pregnant of the II and the III term who live in Tashkent region was reliably increased. Among the pregnant of Khoresm region percent of lymphocytes stayed within the norm. Indicators, received according to the monocyte level, didn't show any differences in the compared regions. Among the women who live in Khoresm region, these indicators differed reliably in their decrease.

While comparing indicators of lysozyme titre among the pregnant of the compared regions, no reliable differences were registered ($p > 0,05$).

The results, received according to the level of sIgA require a special attention, as along with an increase in pregnancy term among women who live in Tashkent region content of sIgA increased reliably ($p < 0,01$). Among the pregnant of Khoresm region we observed an opposite situation, as along with an increase in pregnancy term, concentration of sIgA decreased reliably.

Thus, our attention is drawn by a dynamics of two indicators – the number of lymphocytes didn't alter reliably in the pregnant group of Khoresm region, compared to the non-pregnant, and, among the pregnant of Tashkent region it increased, and concentration of sIgA among the pregnant of Khoresm region decreases reliably according to the terms, while this indicator tended to increase among the pregnant of Tashkent region.

The next stage of our research was studying factors of non-specific resistance of oral cavity according to the age categories of the pregnant who live in different ecological conditions.

While studying percent correlations of lymphocytes in age groups up to 10 years and 21–29 years we observed a reliable increase in their number, compared to the non-pregnant ($p < 0,05$). However, in the age group of 30 years and older this indicator didn't differ reliably from the parameters of the non-pregnant.

The number of rod-cellular neutrophils among the pregnant up to 20 years, 20–29 years, and 30 years and older was reliably increased, and, according to the number of microxyphilic neutrophils these indicators were close in all age groups, among the pregnant and non-pregnant.

The received results prove that the half of the studied indicators of non-specific resistance factors of oral fluid are reliably increased in groups of the pregnant up to 20 years and 20–29 years, and they have a sufficient, physiologically-defined counteraction against the ongoing pathological conditions and inflammation process.

According to the titre of lysozyme and the level of sIgA, reliable differences were revealed between different age groups ($p < 0,001$).

Among non-pregnant women who live in Tashkent region insignificant decreases in all

indicators of lymphocytes, rod-cellular neutrophils, lysozyme titre, and sIgA ($p < 0,05$) were registered along with the age. No specific differences were observed in indicators of different age groups of the pregnant. The main difference was revealed in concentration of sIgA.

In our opinion, this circumstance among the pregnant of Khoresm region is linked to the secondary immune-deficit of the overall organism's immune system, deficit in sIgA synthesis in its necessary degree during an intense activity of the immune system. Among the pregnant of Tashkent region along with a tension in activity of the immune system that is linked to an increase in pregnancy term sIgA is produced in an efficient quantity and corresponds to the norm.

Resume

1. Increases in pregnancy term go along with an increase in the level of lysozyme, decrease in sIgA concentration in oral fluid among the pregnant who live in Khoresm region. It is linked to a mutual complementation of the functions of the pointed factors.

2. Among the pregnant who live in Tashkent region the main alterations in the level of lymphocytes, monocytes, and rod-cellular neutrophils, compared to the nonpregnant, are registered in the II and the II term ($p < 0,05$).

3. Along with an increase in pregnancy term among the pregnant in a region with ecological problems, an increase in lysozyme titre in oral fluid is registered, and concentration in sIgA decreases.

4. According to the level of sIgA among the pregnant who are older than 30 in the compared regions we have received a data of it gradual decrease. Also lysozyme titre decreases down to the norm level, though in other age groups these indicators were increased by 1,8–2,1 times ($p < 0,001$).

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