

ROLE OF SECRETIVE IMMUNOGLOBULINS FOR ALLERGODIAGNOSIS OF RESPIRATORY ALLERGOSA IN CHILDISH AGE

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Determination of secretive immunoglobulins (SI), specially IgA, contributes to the precise diagnosis of respiratory allergosa (RA) with various manifestation (1, 2, 3, 7).

SI, being synthesized as a response to antigenic irritability, neutralize the allergens located onto nasal mucosa. They are stable and resistant towards proteolytic ferments and demonstrate certain virus-neutralizing and antibacterial activity. Thus, SI assist the local defence of respiratory tract; their level and activity reflects in the general state of the immune system.

No data can be found in the available literature concerning application of any method to determine secretive IgA for the diagnosis of RA in our country. Therefore, we suggest the following modified method of T. S. Titova (1974):

Nasal secretion is investigated. 5 ml saline solution is poured in both nasal cavities by means of a pulverizer. The child is advised to blow his nose in a flask or test-tube until 1—1,5 ml secretion is collected. It is homogenized mechanically and the side-particles are taken away by a centrifugation. Holes on the surface of agarose-gel (with monospecific antiserum) are filled with standard SI diluted respectively 1:10, 1:20, 1:40 and nasal secretion itself of the studied patients. The preparations are kept 48 hours in a damp chamber and then in saline solution (to take away the non-precipitated protein). The standard SI and nasal secretion diffuse through the gel and interact with the antiserum, thus forming circles around the holes (their diameter is a direct function of antigen concentration). Lowest diameters' size according to our study corresponds to 12 mg, whereas normal values of secretive IgA are 8—12 mg.

The modified method is applied to study 30 children with RA and 30 controls.

The controls show no detected IgA which is in coordination with the opinion of Appaix, A. et al. (1973): intact nasal mucosa lacks immunoglobulins. Highest level of SI is detected in the organism of those children with RA who suffer often recedings. Our data correlate to those of Pap, S. A. (1979), Terrahe, K. (1974), Baumann, H. (1973), etc. These authors report IgA-deficiency accompanying the often receding RA. This relation is important specially in those cases which show no dislocation of the normal basic tests of allergodiagnosis with suspected RA. We presume that the higher level of IgA is a result of the tendency of the affected organism to increase its IgA-titre as a defensive mechanism; it is our diagnostic criterion as well as a signal of immediately necessity of application of antiallergic treatment.

Another 100 children (60 with RA and 40 control) are investigated by determination of their serum IgA, IgG, IgM, thus analysing their role in the immune defence of childish organism. We apply the radial immunodiffusive method of Mancini (1965). No considerable differences between the results of the controls and those of the children with RA are established; our data coincide with the investigations of Kirchev, P., Mustakov, B., Ankov, V. (1976), Petrov, S. et al. (1976), Benda, Y., Vaskova, L. (1974), Buranski, J. et al. (1974), Burton, M., Cohn, M. (1977), etc. that serum immunoglobulins are not indicators of the immune conditions of children organisms and can not be applied as a routine method in allergodiagnosis of respiratory diseases.

Regardless of our initial attempts we presume that the method of studying SI (IgA, IgG), can be a routine one and needs further details. We carry on investigating the contingent of the Clinic of Paediatrics and Polyclinical section of Ears-Nose-Throat diseases, Higher Institute of Medicine, Varna city. Our next reports will give some additional information.

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ЗНАЧЕНИЕ ИМУНОГЛОБУЛИНОВ ДЛЯ АЛЛЕРГОДИАГНОСТИКИ РЕСПИРАТОРНЫХ АЛЛЕРГОЗ В ДЕТСКОМ ВОЗРАСТЕ

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РЕЗЮМЕ

У 60 детей (30 детей в респираторными аллергиями и 30 здоровых детей в контрольной группе) авторы впервые у нас исследуют секреторный IgA по модифицированной методике Т. С. Титова (1974 г.). Полученные результаты показывают IgA дефицит при часто рецидивирующих респираторных заболеваниях. Увеличение уровня IgA считается сверхзащитной реакцией организма, что приводит к необходимости проводить противоаллергическое лечение.

Внедренная уже полтора года методика аллергодиагностики респираторных заболеваний в детском возрасте считается авторами рутинной и они работают над ее усовершенствованием.