

## **THE ROLE OF TOLL-LIKE RECEPTORS (TLR) IN THE IMMUNE RESPONSE TO INFLUENZA VACCINATION**

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Toll like receptors (TLR) play a significant role in the mechanisms of immunological response. In literature, little information can be found on their role in the formation of the immunological response to vaccination against influenza virus.

The aim of the work was to analyze the relationship between the level of immunity against influenza and the response to the anti-influenza vaccination on the presence of soluble forms of TLR in the serum.

Materials and methods.

55 chronically hemodialyzed patients (group A) and 55 healthy volunteers (group B) took part in the study. Both groups were vaccinated against influenza using a subunit vaccine (Agrippal). A control group consisted of 22 chronically hemodialyzed patients. The concentration of TLR-7 was determined in serum samples using a commercial enzyme-linked immunosorbent assay (ELISA) according to the manufacturer's instruction (USCN, Wuhan China).

Results.

The concentration of TLR-7 was found in 40.6% of responders and in 42% non-responders in group A in terms of A/H1N1 antigen. An increase in the concentration of TLR-7 was found in 44% patients with immunity in group A and in 38% patients without immunity in terms of A/H1N1 antigen. No statistically significant differences were observed in the concentrations of TLR-7 before and after vaccination in the sera of patients from all groups.

Conclusions. Immunization with a subunit vaccine does not influence the concentrations of TLR-7 present in a soluble form in the serum.