

**IMMUNE RESPONSE TO INFLUENZA VACCINE IN  
HEMODIALYZED PATIENTS – ANALYSIS OF NEURAMINIDASE  
ANTIBODY TITERS (N1,N3,NB)**

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The aim of this study was to assess humoral response to influenza vaccine in 71 chronic hemodialyzed patients (group A), who received inactivated subunit vaccine (Agrrippal, Novartis) in the epidemic season 2009/2010. Control groups were: 39 hemodialyzed patients who were not vaccinated (group B) and 63 healthy adults who received the vaccine (group C). Antibody levels to neuraminidase antigens were measured before vaccination and after 1 month by neuraminidase inhibition test performed with influenza strains included into the vaccine recommended for the season 2009/2010 along with turkey red blood cells. Antineuraminidase antibody titers were significantly higher after vaccination than before in group A and C. The geometric mean titer (GMT) increased from 4,58 to 55,75 for antigen N1, from 11,03 to 51,06 for antigen N3 and from 10,10 to 47,68 for antigen NB in group A. GMT in group C increased from 1,95 to 38.01 for antigen N1, from 4.75 to 61.89 for antigen N3 and from 2.88 to 30.05 for antigen NB. In group B (not vaccinated) GMT changed from 1,49 to 2,76 for N1, from 1,48 to 3,06 for N3 and from 1,34 to 2,21 for NB. The mean fold increase (MFI) of anti-NA antibody levels after vaccination amounted to 12,17 for antigen N1, 4,63 for antigen N3 and 4,72 for antigen NB in group A. MFI in group C amounted to 19.47 for antigen N1, 13.04 for antigen N3 and 10.45 for antigen NB. MFI in group B (not vaccinated) amounted to 1,86 for N1, 2,07 for N3 and 1,64 for NB. Conclusions: significantly higher post-vaccination anti-NA titers were found in A and group C for N1, N3 and NB antigens. The study showed a significant increase in the parameters of an immune response to influenza vaccine in both groups of vaccinated patients (group A and C), but the immune response in hemodialyzed patients is weaker than in healthy adults.