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ePoster Viewing
Influenza, from bench to bedside

SEROLOGICAL STUDY FOR A/H2N3 AVIAN INFLUENZA INFECTION IN GEORGIA

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Background: Georgia is located on the migratory route of wild waterbirds. Various subtypes of avian influenza viruses, including A/H2N3, have been detected in wild birds on our territory. Backyard farming is very popular in Georgia; backyard animals possible contact with wild birds could lead to further transmission of influenza viruses to humans.
Objectives: The objective of this study was to look for evidence of A/H2N3 avian influenza infection in population of Georgia.
Methods: A total of 314 adult residents (≥ 17 years) of Samegrelo region (western part of Georgia) seeking for hospital assistance from January 2012 to October 2013 were enrolled in a cross-sectional, serological study. Serum samples of study participants were tested against A/H2N3 avian influenza viruses by means of Hemagglutination Inhibition (HI) assay using Horse Red Blood cells. HI antibody titers ≥ 1:40 were considered as positive for evidence of previous infection. **Results**: Among study subjects 10.5% (33/314) had elevated HI antibody titers ≥40 against avian A/H2N3 influenza virus. Age range of 31 positively tested study individuals varied from 55 to 86 year old (median 63 years); 22,1% (31/140) of Samegrelo residents aged ≥ 55 had elevated antibody titers against avian A/H2N3 influenza virus . We assumed that elevated titers were due to pandemic A/H2N2 virus not circulating in human population since 1968. Two additional positive study participants were born after 1968, in 1981 and 1982. Farming backyard poultry was not considered statistically significant in case of having elevated antibody titers against avian A/H2N3 influenza virus.
Conclusion: Our study data suggest that pandemic A/H2N2 antibody reserve in persons ≥ 55 was cross reactive to avian influenza A/H2N3 virus. However, two cases born after 1968 with elevated avian influenza A/H2N3 antibody titers require further investigations to confirm zoonotic transmission of influenza infection.