MEASLES IGG SERO-PREVALENCE AND ITS ATTRIBUTABLE FACTORS IN 5-25 YEAR OLD CASES PRIOR MASS VACCINATION CAMPAIGN IN URMIA –IRAN

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BACKGROUND: To examine the persistence of vaccine induced antibody, participants with documented history of vaccination were assessed to determine the sero-prevalence and titer of measles antibody.

SABJECTS AND MTHODS: This study was carried out in Urmia- Iran. Documented history of at least a single dose of live attenuated measles vaccine (at 9 or 15 month of age) was a necessary inclusive criterion. Blood was collected from 840 subjects between 5-25 years old. The sera were tested for anti-measles IgG antibodies by the ELISA method. Associations between predictive factors such as demographic data, vaccination status with IgG sero prevalence were investigated by logistic regression analysis.

RESULTS: The antibody titers in 54.76% of cases were in the protective level range (IgG>12IU). The mean of antibody was seen to significantly increase after the 16th year of life. The antibody titers were higher in participants who received one dose of measles vaccine in comparison with the persons who were immunized with two doses of measles vaccine. Antibody titers were slightly higher in men than in women. On multiple logistic regression analysis, of all the variables examined, only vaccination status retained a significant association with anti measles sero-positivity rate (estimated odds ratio=0.395 $p<0.05$).

CONCLUSION: Elevation of antibody titer many years after vaccination is most likely due to boosting effect from repeated exposure to circulating wild virus resulting in unapparent or sub-clinical reinfection. This group of people would be the most likely to support viral transmission in the absence of disease.

Keyword: Measles, Immunization, Sero-positive