Immunity against Measles among Vaccinated School going Children in Zahedan, Southeast of Iran

Dear Editor,

Measles is an important childhood disease and an acute viral infection, which is very contagious and recovery from it is the rule. But serious complications of the respiratory and central nervous system may occur. Measles can be prevented with live, attenuated vaccine. In our country (Iran), despite the use of vaccine since 1976, we are still having local epidemics especially in the children aged 15-20 years. Therefore the present study was conducted to determine the level of immunity in this target population in Zahedan.

A total of 375 school going children were selected randomly from eight schools in four areas of Zahedan (a city in the sistan and Baluchestan province in southeast of Iran) in 2000-1. They were the students, who fitted the selection criteria. These criteria included: 1- students who have history of vaccination, based on vaccination card and 2- Iranian nationality. Afghanian students and students who have not received any vaccine, were not included in the survey. After recording the demographic data, 5cc of blood was drawn from each case. These samples were evaluated by haemaglutination inhibition method (HI). According to this method and the type of kit, the titers of 1:4 were positive and protective to measles but the titers < 1:4 were negative and nonprotective to measles.

Of the 375 students (183 female and 192 male) who were evaluated by HI method 298 cases (76.8%) were positive (HI 1:4). The titers of HI in 77 cases (23.2%) were < 1:4. From 375 cases, 349 cases (93%) were vaccinated twice (at the age of 9 and 15 months). 78.6% of this vaccinated group were immune according to this method. Only 7% of the children were vaccinated once. The titers of antibody against measles in the recent group were less than protective level. By using chi-square test, there was no significant statistical difference between the male and female in the immunity level (p > 0.05). Also there was no significant statistical difference in the age and antibody titers between the male and female students (p > 0.05).

Our study showed that 76.8% (298 cases) of total students (375) were immune against measles. In one study in Iranshahr district in 1994 by Moradi et al., among 411 vaccinated children (25-60 months), only 64/3% (271 cases) of the children under study had antibody against measles virus, while 95.6% of this group had been vaccinated. In Moradi study, 89.5% of children had been vaccinated against measles at 9 and 15 months of age and 6% of cases were vaccinated only once but in our study, 93% of children had been vaccinated twice and only 78.6% of them had antibody which is not enough for producing disease-free zone. A prevalence of more than 90% immunization of infants and immunity of 95% in population, has been shown to produce disease-free zone. Sarwghad et al repoted that among 172 vaccinated school-aged children in Mashhad, only 71% of cases had antibody against measles and 29% of subjects were seronegative and nonimmune against measles. According to our results, it is concluded that the recent vaccination program in Iran (9 and 15 months of age) for production of immunity against measles was insufficient and the children who were vaccinated with

References


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Should Bacitracin Sensitivity be Used in the Presumptive Identification of Group A Streptococci?

Dear Editor,

The presumptive identification of group A streptococci (GAS) is usually done by testing for sensitivity to bacitracin. Many laboratories use this as the sole test for diagnosing GAS infections due to the difficulty in performing serogrouping and high cost of antisera. We have tested a total of 216 beta hemolytic streptococci by serogrouping using commercial antisera (Bio-Rad, Australia) and bacitracin sensitivity using 0.04U disks (Hi Media, Mumbai). One hundred and sixty three strains were serogrouped as group A, 21 as group G and 32 as group C streptococci. We found 9.8% (16/163) strains of GAS were resistant to bacitracin, whereas 85.7% (18/21) strains of group G streptococci and 90% (29/32) strains of group C streptococci were sensitive to bacitracin.

The bacitracin sensitivity test has been in use for more than half a century. Several workers have used different interpretation criteria and varying concentrations of bacitracin in an effort to define the accuracy of the test in identifying GAS. Nevertheless it appears from this study that the utility of the test even as a preliminary test for screening GAS is debatable.

References

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