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Letters to the Editor / Cartas al Editor

PREVALENCE OF ANTIBODIES AGAINST RUBELLA VIRUS IN SPAIN.

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To the Editor

The importance acquired by the strategy of anticipating rubella revacunation needs no emphasis[1]. Recommendations by experts committees and actualization of the prevailing childhood immunization schedules are unanimous when it comes to including the above-mentioned strategy[2]. In this context, seroepidemiologic survey studies allow the assesment of humoral immunologic response against viral structural antigens[3,4] despite the assumed potential bias attached to their design. Being aware of the importance of describing rubella seropositivity real status in our setting we decided to document such situation in children under theoretically proper immunization schedules. The present contribution relies on data from a cross-sectional study carried out between 1999 and 2000 in children from the autonomous region of Spain, Castilla y León, (the largest region in the European Economic Community). The chosen framework was restricted to serum samples received in a Microbiology Laboratory of a University Hospital with the request of analyzing infectious markers other than rubella antibodies. According to demographic features a double stratification was made and we evaluated 323 children whose age was between 1 and 5 years and 1166 from 6 to 14 years of age. All samples were alicuoted and frozen (-20ºC) until the moment of processing. Antibodies to proteic antigens of rubella viral envelope were determined by means of an indirect enzymeimmunoassay (EIA) (Bio-Whittaker, USA). Results were validated according to manufacturer's instructions and samples that showed a neat absorbance greater the cut-off value plus 15% were considered positive.

Our findings reveal that 309 of the investigated samples belonging to children from 1 to 5 years of age (95.7%) had antibodies to rubella virus (95% CI, 93.2% to 98.2%), being the rest of them seronegative at the moment of our study. In the age group ranging from 6 to 14 years the prevalence of antibodies was 90.5% (1055/1166) (95% CI, 88.6% to 92.5%) which resulted lower to that found in the previous group and the difference was statistically significant (p=0.003). This fact reflects a decrease of 5.2% in the seropositivity percentage of the second age group. An additional finding was that when we investigated the 6 to 14 years old group in terms of gender differences, girls (568) reached significantly higher percentages of seroprotection than boys (521) did (94.4 vs 87.1%, p=0.000).

Conscious of the caution required in this kind of studies and assuming the internal validity for the evaluated population, our results point out to a age dependent loss of seroprotection. Among the potential causes that maintain this fact we may denote on the one hand the differences in vaccine coverage reached by both groups of children, just as Davidkina et al.[5] have recently reported, and on the other hand limitations inherent in the vaccination itself[6,7]. Moreover, it is of course true that in our country, as well as in all developed countries, systematic vaccination of girls before puberty yields high efficiency, in order to prevent consequences derived from a potential primary infection during pregnancy[8,9], all the same it is also certain that we still attend to the presence of small proportions of unprotected persons. The efficiency of new strategies of anticipating combined vaccines needs to be evaluated, and seroepidemiological studies seem to be a good tool for such purpose[10], being the detection of antibodies by means of EIA the most sensible method for this aim.

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