

Poster presentation

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Measles, Mumps, Rubella serology in juvenile idiopathic arthritis

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Background

To assess the efficacy of live attenuated Measles, Mumps, Rubella (MMR) vaccination in Juvenile Idiopathic Arthritis (JIA) patients.

Methods

MMR seroprevalence and IgG-levels were retrospectively determined in 418 JIA patients aged 1–22 years of whom a stored sample was available. Clinical data and vaccination status were recorded. Sera were tested by ELISA. MMR serology of JIA patients was compared to 1989 age-matched healthy controls (HC), in which serology had been previously determined. Analyses were adjusted for age and number of vaccinations.

Results

In the group with no vaccinations, MMR seroprevalence was significantly lower in JIA patients (measles 63% vs. 92%, mumps 39% vs. 92%, rubella 65% vs. 95%). This was probably due to higher natural infection rates in HC, since the majority of HC without vaccination were born in the period before introduction of MMR vaccination. These differences diminished after vaccination, although the overall seroprevalence of mumps and rubella remained lower in JIA ($p < 0.001$). MMR seroprevalence and IgG levels were significantly lower in systemic JIA patients. 95 patients using methotrexate had MMR serology comparable to patients without methotrexate.

Conclusion

Differences in MMR seroprevalence between JIA patients and healthy controls disappear after increasing vaccinations, indicating that JIA patients are able to generate a serological response to MMR vaccination comparable to healthy controls. MMR serology is lowest in systemic JIA patients. Methotrexate does not influence MMR serology.