

Rh immune globulin in pregnancy: Relationship to autism development. J.H. Miles, T.N. Takahashi. Dept Child Hlth, Med Gen Div, Univ Missouri Hosp, Columbia, MO.

Autism is believed to be predominately a genetic disorder. However, recent increases in the prevalence of autism have raised the possibility that certain environmental exposures may cause or potentiate the development of autism. The most debated factor has been the increased exposure of children to mercury in the form of thimerosal, used to stabilize vaccines. Previous studies have concentrated on post-natal vaccines; we reasoned that exposure in pregnancy might have a greater effect on the developing nervous system. Since only Rh- women receive Rh immune globulin during pregnancy, any effect of Rh immune globulin exposure should be mirrored by an increased percentage of Rh- mothers of autistic children. We conducted a structured telephone survey to determine the blood type and Rh immune globulin exposure of mothers of autistic children who were evaluated at the University of Missouri Autism Clinic from 1995 to 2004. Results were verified by review of pregnancy, delivery and immunization records. Total thimerosal and organic mercury exposures were calculated for each autistic child. Control pregnancies consisted of non-autistic sibs, children with Down syndrome and other genetic disorders and local Rh- prevalence data. Results were correlated with autism subtypes and age of onset. Data from 200 autism and 50 control families have been analyzed. There was no significant difference in the Rh- status for autism mothers (19.5%; 30/154), Down syndrome mothers (24%;6/25) or genetics clinic mothers (16%; 4/25). Likewise, exposure to Rh immune globulin during pregnancy was comparable for autism mothers (12.9%; 26/201) and Down syndrome mothers (15%; 4/27). Rh immune globulin exposure during pregnancies of non-autistic sibs of children with autism was similar to the exposure in the autism pregnancies (12.9% vs 12.6%). Analysis of total early childhood thimerosal exposure in the three groups is underway. We conclude that there is no indication that pregnancies of children with autism were any more likely to be complicated by Rh immune globulin/thimerosal exposure than those of controls, which suggests no etiologic role for thimerosal in the development of autism.