Autism Continued to Increase Subsequent to Thimerosal Removal

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January 11, 2008 — Analysis of data from a California database shows that the number of autism cases continued to increase after the ethylmercury-containing preservative thimerosal was eliminated from most childhood vaccines, according to a report in the January issue of the Archives of General Psychiatry.

"These findings are inconsistent with the idea that exposure to thimerosal is a major cause of autism," study coauthor Robert Schechter, MD, from the California Department of Public Health, in Richmond, told Medscape Psychiatry.

Diagnosed cases of autism have continued to increase in the past decade, and it has been suggested that this may be linked to increased exposure to thimerosal in vaccines. Thimerosal has been used since the 1930s to prevent microbial contamination in vaccines. Infants and toddlers in the United States were exposed to more thimerosal after recommendations in 1991 that influenza and hepatitis B vaccines be added to childhood immunization. They have been exposed to less thimerosal since its removal from childhood vaccines was recommended in 1999. From 1999 to 2004, the average exposure to thimerosal among healthy infants and 2-year-olds dropped to minimal amounts.

If thimerosal exposure is a primary cause of autism, the prevalence would be expected to decrease as children's exposure has dropped to the lowest levels in decades. In the current study, researchers sought to determine whether trends in the California Department of Developmental Services (DDS) autism client database support the hypothesis that thimerosal is a primary cause of autism.

They looked at prevalence of autism in children born from 1989 to 2003 who received public services for autism from the DDS from mid-1995 to mid-2006.

They found that instead of decreasing, the prevalence of autism for children at each year of age from 3 to 12 years increased consistently throughout the study period, including when exposure to thimerosal was declining.

"Our findings are in concordance with the rigorous 2004 review of at least 12 previous published and unpublished studies by the [Institute of Medicine] IOM Immunization Safety committee, which concluded that the body of evidence rejected a causal relationship between thimerosal-containing vaccines and autism," the authors write.
The hypothesis that thimerosal, a modifiable risk factor, is a major cause of autism offered the hope for prevention through reduced exposure, they note. Although their present findings do not support this hypothesis, the authors encourage the continued quest for discovery of other potential modifiable risk factors.

"Thimerosal Disappears but Autism Remains"

The study by Schechter and colleagues is just one of a long series of studies that has accumulated over the past 6 or 7 years and provides additional evidence of the lack of association between thimerosal exposure and risk of autism in the US population, Eric Fombonne, MD, from Montreal Children's Hospital, in Quebec, who wrote an editorial accompanying the paper, told Medscape Psychiatry.

The main messages from the study are that parents who have a child with autism should be reassured that their child's autism did not occur through vaccination, and they should vaccinate the child's siblings, he said. The practice of chelation "treatment," which consists of removing mercury from the body, for children with autism is dangerous and is not warranted, he added. Chelation therapy gives false hopes instead of doing what is needed, which is education and behavioral stimulation, he noted.

"I think it is very important that family doctors, pediatricians, and healthcare practitioners strongly say to parents, 'The research has been done. There is absolutely no risk that thimerosal is bad. And if you don’t vaccinate your child against measles or against the other recommended diseases, you put him or her at risk.'"

Measles is a preventable infectious disease that can be lethal, so it is very important that people maintain immunity by keeping vaccination at its current high level, he noted.

No financial disclosures were reported by the study authors. In the United Kingdom, Dr. Fombonne has provided advice on the epidemiology and clinical aspects of autism, advising parents, measles-mumps-rubella vaccine manufacturers, and several government committees between 1998 and 2001. In the United States, he has been a consultant to ad hoc committees from the Institute of Medicine and the American Academy of Pediatrics and is an expert witness for the US Department of Health and Social Services and for vaccine manufacturers in the US thimerosal litigation. None of his research has ever been funded by the pharmaceutical industry.