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Autoimmune process linked to autistic bowel disorder

New research by Andrew Wakefield and colleagues strongly implicates an autoimmune process (in which the body attacks its own tissues) as a cause of the unique form of gastrointestinal disease they have previously reported in many autistic children (see ARRI 16/1, 15/4).

In the new study, F. Torrente, Wakefield, and colleagues compared duodenal biopsies from 25 children with regressive autism and 34 control subjects and detected a subtle but distinct form of small bowel abnormality in the autistic subjects. Tests on autistic children's tissues revealed evidence of direct binding of "self antibody" to the surface of epithelial cells lining the intestine, indicating an autoimmune process. The researchers also report finding increased epithelial division and infiltration of T lymphocytes. These abnormalities were not detected in any of the control subjects.

The researchers suggest that the bowel changes identified in many autistic children may be a manifestation of an environmentally-triggered genetic condition affecting several systems, of which brain dysfunction is simply the most apparent. Previous research by Wakefield and colleagues has implicated the measles-mumps-rubella (MMR) vaccine as a precipitating factor in autism involving bowel pathology.

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"Small intestinal enteropathy with epithelial IgG and complement deposition in children with regressive autism," F. Torrente, P. Ashwood, R. Day, N. Machado, R. I. Furlano, A. Anthony, S. E. Davies, A. J. Wakefield, M. A. Thomson, J. A. Walker-Smith, and S. H. Murch, *Molecular Psychiatry*, Vol. 7, No. 4, 2002, 375-82.

—and—

"Bowel finding suggests autism is autoimmune disorder," *UniSci Daily News*, April 30, 2002.

SAVE THE DATE!

Upcoming Defeat Autism Now! (DAN!) Conference: Oct. 25-27, 2002 San Diego, California

Autism researchers present explosive new findings, Burton threatens criminal charges against agencies

At a June 19 hearing held by the U.S. House of Representatives Committee on Government Reform, autism researchers presented dramatic new evidence in support of a link between autism and the measles-mumps-rubella (MMR) vaccine. At the same time, committee chairman Dan Burton revealed memos indicating that the government knew about the risks of mercury in vaccines and covered up this information for many years, and he threatened criminal prosecution if a cover-up is proven.

Among the physicians presenting new findings at the June 19 hearing:

• **ANDREW WAKEFIELD, M.D.** Wakefield, who first identified the unique form of ileocolitis seen in many autistic children (see related article on this page), cited new research by John O'Leary and colleagues, who examined viral genetic material from intestinal biopsies of 12 autistic children with ileocolitis. A previous study had identified the viral genetic material as measles, and O'Leary et al.'s new analysis further identified it as being from vaccine strain measles virus.

"These data," Wakefield said, "constitute a key piece of evidence in the examination of the relationship between MMR vaccine and regressive autism."

In addition, Wakefield said, his own research team has found that autistic children with ileocolitis were significantly more likely to suffer a secondary regression, and to develop particularly severe ileal abnormalities, if they had received several MMR shots than if they had received only a single MMR shot. Wakefield told the House committee that the Vaccine Safety Committee of the Institute of Medicine has stated that such response to a re-challenge with the MMR vaccine "would constitute strong evidence of an association."

Wakefield also attacked a recent study in the journal *Clinical Evidence* that purported to find no link between autism and MMR, saying that the study excluded vast amounts of contradictory evidence and "was no more than a review of the epidemiological studies... that have already been dismissed as irrelevant by an independent review commissioned by the Institute of Medicine."

• **ARTHUR KRIGSMAN, M.D.** Critics have charged that Wakefield's work has not been replicated. However, at the June 19 hearing, Krigsman reported the first independent corroboration of Wakefield's discovery of a unique form of ileocolitis in autistic children. Evaluating 43 consecutive children with autism (usually of a regressive nature) and gastrointestinal symptoms, Krigsman and colleagues identified pathologic lymphonodular hyperplasia of the terminal ileum, the same abnormality identified by Wakefield, in 90 percent of subjects. Krigsman is now having samples from these patients tested for evidence of measles virus

• **WALTER O. SPITZER, M.D.** Spitzer, reviewing the findings of a recent study (Davis et al., *Archives of Pediatric and Adolescent Medicine*, 2001) that found no MMR/autism link, charged that information not reported in the paper revealed that the "power" for the key results was only 12 percent. "In non-jargon English," he said, "a power of 12 percent means that one has a chance of 88% of declaring no increase in risk if indeed there was a two-fold increase in the risk." Calling the study "grossly underpowered," he said that this "fatal flaw" made its results virtually meaningless.

Thimerosal: Burton threatens criminal charges

At the hearing, Congressman Dan Burton also addressed the issue of mercury in vaccines, calling for criminal prosecution of any government agency that was aware of and did not take action on the potential dangers of the mercury-containing vaccine preservative thimerosal. Data increasingly link mercury exposure to autism (see ARRI 15/4, 15/3, 14/2).

Burton produced government agency memos indicating that concerns about thimerosal arose years before parents and researchers brought pressure on the FDA and CDC to investigate the issue. One 1999 memo mentions an FDA "interim plan... already in place for many years" to get rid of thimerosal, al-

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