New concerns voiced about MMR vaccine

(continued from page 1)

havioral regression, and all but one suffered from bowel problems. The researchers compared these subjects to healthy controls and to children with ulcerative colitis.

They report that an abnormality called ileocolonic lymphoid nodular hyperplasia (LNH) was present in 54 of the disabled subjects, but in only two controls. Ileal biopsies showed that another abnormality, reactive follicular hyperplasia, occurred in 46 of 52 of the disabled children and four of 14 of the children with ulcerative colitis, but in none of the healthy controls. Chronic colitis was seen in 53 developmentally disabled children, compared with one healthy control, while active ileitis was found in four developmentally disabled children, and no controls. The researchers conclude, "An endoscopically and histologically consistent pattern of ileocolonic pathology has been identified in a cohort of children with developmental disorders."

Wakefield's 1998 report in *The Lancet* (see ARRI 12/1) first tentatively linked autism to MMR (measles-mumps-rubella) vaccinations. In that research, Wakefield found that eight of 12 children with a history of bowel problems and autistic regression had developed autistic symptoms within weeks of receiving MMR vaccinations, and that all 12 children had intestinal abnormalities. He later reported similar findings in 48 other children. Wakefield's 1998 research led him to conclude that some autistic children, because of genetic abnormalities affecting their immune systems, "may not handle certain viruses appropriately, possibly including attenuated strains [those used in vaccines]."

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Singh, Vijendra, presentation to the International Public Conference on Vaccination, September 2000.

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"Enterocolitis in children with developmental disorders," A. J. Wakefield, A. Anthony, S. H. Murch, M. Thomson, S. M. Montgomery, S. Davies, J. J. O'Leary, M. Berelowitz, and J. A. Walker-Smith, *American Journal of Gastroenterology*, Vol. 95, No. 9, September 2000, pp. 2285-2295. Address: Andrew Wakefield, Dept. of Medicine, Royal Free and University College Medical School (Royal Free Campus), Hampstead, London NW3 2QG, U.K.

Do amygdala defects play a role in autism?

New research indicates that defects of the amygdala, a complex of two almond-shaped brain structures located within the temporal lobes on either side of the brain, are linked to some symptoms of high-functioning autism.

M. A. Howard and colleagues recently studied 10 subjects with high-functioning autism, comparing them to control subjects matched for age, sex, and verbal IQ. Neuropsychological tests, the researchers say, revealed that subjects with high-functioning autism exhibited "social perceptions similar to those seen in patients with amygdala lesions," including impairment in recognizing facial expressions of fear; poor perception of eye-gaze direction; and poor memory of faces.

MRI scans, Howard et al. say, revealed markedly enlarged amygdala volumes in autistic subjects. This is consistent, they note, with reports of abnormally large head size in many autistic individuals, and with post mortem studies showing increased cell density in the autistic amygdala.

The researchers suggest that some cases of high-functioning autism may result from inadequate "pruning" of neurons during early brain development. "We suggest increased amygdala volume may indicate sub-optimal operation of the structure," they say, "causing impairments in social perception."

They note, however, that enlargement of the amygdala has also been reported in bipolar disorder, and caution that their findings may not be specific to high functioning autism.

In related research, H. D. Critchley and colleagues report that functional MRI scans of adults with autism show that unlike controls, these subjects "did not activate a cortical 'face area' when explicitly appraising

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New study supports early intervention gains

A new study adds to the evidence that early intervention is a powerful tool for treating autistic children, although Tristram Smith and colleagues report more modest results than other researchers have obtained.

Smith et al. compared two groups of children who began treatment between the ages of 18 and 42 months. The children were divided into two groups:

—Seven children with autism and 8 with pervasive developmental disorder (PDD) received 30 hours per week of intensive training, based on the techniques used in the UCLA Young Autism Project, for two to three years. Professional therapists conducted most of the training, with parents assisting for several hours per week.

> Smith et al. found that children with pervasive developmental disorder benefited as much from early intervention as did children with "classical" autism.

—Seven children with autism and six with PDD received therapy provided by parents, who were trained by professional therapists. In addition, the children were enrolled in special education classes for 10 to 15 hours per week.

When the children were between seven and eight years old, the researchers re-evaluated them. While the two groups were matched at the beginning of the study, Smith et al. say, "at follow-up the intensive treatment group outperformed the parent training group on measures of intelligence, visual-spatial skills, language, and academics." However, IQ gains in the intensive-intervention group averaged 16 points, while earlier research by Ivar Lovaas et al. showed gains of 31 points. In the new study, 27 percent of children were able to enter regular classes, compared to 47 percent in Lovaas's earlier work. Also, Smith et al. reported lesser improvements in behavior problems than in the Lovaas study.

Smith et al. also found that children with PDD benefited as much as children with autism, and that IQ at intake did not correlate with rate of progress at followup.

"Although the results were more mixed than in some previous studies," Smith et al. say, "the present study substantiates the view that intensive early intervention can be a powerful intervention." They note, too, that their therapy program was less intensive than the program used by Lovaas et al., because it involved fewer hours of training per week, and less involvement on the part of parents. In addition, Smith et al. phased out treatment for children showing little progress, and did not use the aversive procedures used in the original Lovaas study.

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"Randomized trial of intensive early intervention for children with pervasive developmental disorder," Tristram Smith, Annette D. Groen, and Jacqueline W. Wynn, *American Journal on Mental Retardation*, Vol. 105, No. 4, 2000, pp. 269-285. Address: Tristram Smith, Department of Psychology, Washington State University, P.O. Box 644820, Pullman, WA 99164-4820, tristram@mail.wsu.edu.