

Check for Strep in Sudden-Onset Childhood OCD

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TORONTO — A sudden, severe onset of childhood obsessive-compulsive disorder with tics should prompt a throat culture for group A streptococcus, Dr. Tanya Murphy said at the joint annual meeting of the American Academy of Child and Adolescent Psychiatry and the Canadian Academy of Child and Adolescent Psychiatry.

Considerable controversy surrounding the issue persists. But enough evidence exists to suggest a link between acute strep infections and the onset of pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS), said Dr. Murphy, director of the Child Tic and Anxiety Disorder Clinic, University of Florida, Gainesville.

The OCD that children develop with a strep infection looks quite different from the chronic course usually observed. "The onset is sudden and dramatic," she said. "The illness follows an episodic or sawtooth course that's marked by changes in strep titers. During exacerbations, you will see a positive culture or rising titers, and during prolonged remission, the titers will fall." The OCD is often accompanied by choreiform movements, tics, and comorbid symptoms, including emotional lability, separation anxiety, nocturnal enuresis, and change in school performance.

Some children with PANDAS may not have a positive strep throat culture, however. In these cases, serial strep titers may give evidence of a subclinical infection. If strep is present, children should take a full course of antibiotics and return for a repeat culture shortly after the antibiotic is completed.

PANDAS appears to be at the center of a convergence of three factors, Dr. Murphy said: a group A strep infection, genetic predisposition (familial OCD, Tourette's syndrome, or rheumatoid fever, including Sydenham's chorea), and an environmental stress factor such as a central nervous system injury or coinfection. The incidence peaks at ages 5-12 years—the same ages in which strep infections peak.

Dr. Murphy presented the results of a prospective study of 25 children, aged 7-17 years, with typical OCD and tics. The children were assessed every 6 weeks and had at least six consecutive assessments; strep titers were taken at each visit. Fifteen children exhibited an episodic or sawtooth disease course. Almost 60% of the episodic group had elevated group A strep titers on all of their visits, while 60% of the steady disease course group had no elevated titers at any time, suggesting that those with a PANDAS-like course have had more frequent undetected strep infections or prolonged immune reaction to past infections.

Those with episodic disease were also more likely to have exacerbations in the fall and winter, concurrent with the seasonal rise in strep infections. The children in the episodic group were more likely to be male (67% vs. 30%) and have attention-deficit hyperactivity disorder (73% vs. 40%), compared with those in the steady course group.

"Unlike its namesake, however, PANDAS isn't all black and white," Dr. Murphy

said. There have been few reports that antibiotics for children suspected of having the disorder improved their OCD or tic symptoms. Definitive studies still need to be conducted to clarify the impact of antibiotic treatment on symptoms.

In a 2005 study, 23 children with PANDAS received either azithromycin or penicillin prophylaxis. The drugs decreased additional strep infections and neuropsychiatric symptom exacerbations (*Biol. Psychiatry* 2005;57:788-92).

In 2002, a prospective study found that children with PANDAS experienced OCD symptom resolution after receiving antibiotics at the sentinel OCD episode (*Arch. Pediatr. Adolesc. Med.* 2002;156:356-61).

An early clinical trial involving the use of prophylactic penicillin for PANDAS revealed no conclusive evidence that the antibiotic reduced clinical exacerbation. However, the sample size was small (37 subjects), the treatment arm was brief,

and the lack of efficacy may have been attributable to the failure of antibiotic therapy to eliminate streptococcal colonization in the patients enrolled in the study, Dr. Murphy said. Since then, investigators have reported improvement in neuropsychiatric symptoms with antibiotic treatment in patients presenting with PANDAS. Difficulties with study design and the small sample size of these early antibiotic trials limit the clinical influence of their findings. ■

