

# PEDIATRIC NEUROLOGY BRIEFS

## A MONTHLY JOURNAL REVIEW

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VOL 9, NO. 9

SEPTEMBER 1995

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### INFECTIOUS DISORDERS

#### **MMR VACCINE AND TRANSVERSE MYELITIS**

Postvaccination transverse myelitis developed within 5 days following measles, mumps, and rubella vaccine in a 20 year old man diagnosed and treated at the Hurstwood Park Neurological Centre, Haywards Heath, West Sussex, England. The combined vaccine had been substituted for the rubella vaccine required for employment at a children's facility in the United States. Fever, malaise, sore throat and rash fluctuated over 2 weeks and were followed by urinary retention, ascending paresthesia, and flaccid paraplegia. Cerebrospinal fluid contained  $370 \times 10^6$  white cells (80% lymphocytes), 1.8 mg/l protein, and 3 mmol/l glucose. Serological tests showed a significant rise only in rubella antibody titers. MRI was normal. Treatment with IV steroids provided limited improvement and paralysis persisted below T6. (Joyce KA, Rees JE. Transverse myelitis after measles, mumps, and rubella vaccine. BMJ 12 August 1995;311:422).

COMMENT. The authors cite 3 previous reports of rubella postvaccinal transverse myelitis. They caution that antibody status be checked before immunization and only the required vaccine be used. My mentors, WG Wyllie and Randolph K Byers, were convinced of the potential neurological complications of immunization. My own clinical bias, though based on case studies, is in agreement with their views and teachings. Today, the tendency is to minimize the dangers of vaccines as only temporally related, probably coincidental, and unproven by statistics. It was Thomas Carlyle who said "one can prove anything with figures." The tragic consequence of a seemingly simple and innocuous injection in a young person on the threshold of a new life and occupation as an immigrant to the US, as reported above, should be a reason for pause and moderation of the enthusiasm of some for universal immunization, including the new varicella vaccine.

**Non-specific benefits from measles immunization** are reported from the Epidemiology Research Unit, Copenhagen, Denmark.

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(Aaby P et al. BMJ 19 August 1995;311:481-5). Analysis of mortality studies from developing countries showed that protective efficacy against death after measles immunization ranged from 30% to 86%, much higher than the proportion of deaths that could be attributed to acute measles. DTP and polio vaccinations were not associated with mortality reduction. The prevention of measles did not explain the reduced mortality among immunized children. Child survival might benefit from standard titre measles immunization before 9 months of age and by reimmunization.

## MOVEMENT DISORDERS

### **TIC DISORDERS AND TOURETTE'S SYNDROME**

The relationship between Tourette's syndrome (TS) and chronic tic disorder was evaluated in 71 unselected children referred for psychopharmacological treatment at the Massachusetts General Hospital, Boston. Children with TS (32) and chronic tics (39) differed from controls in rates of comorbid psychiatric disorders including ADHD, obsessive-compulsive disorder, mood disorders (depression, bipolarity), antisocial disorders (conduct and oppositional defiant disorder), and anxiety disorders. Both TS and chronic tic groups also suffered from cognitive impairments, lowered academic achievement (WRAT arithmetic), arithmetic learning disabilities, and school dysfunction. TS patients differed from tic disorder patients in the significantly higher rates of obsessive-compulsive disorder, oppositional defiant disorder, and simple phobia. TS and chronic tic disorder are related disease entities, with TS being a more severe form of tic disorder. (Spencer T, Biederman J et al. The relationship between tic disorders and Tourette's syndrome revisited. J Am Acad Child Adolesc Psychiatry September 1995;34:1133-1139). (Reprints: Dr Spencer, Psychopharmacology Unit (ACC-725), Massachusetts General Hospital, Fruit Street, Boston, MA 02114).

COMMENT. These findings are consistent with genetic studies showing that the TS gene is variably expressed as TS, transient tic disorders, or chronic tics. Comorbidity with ADHD, occurring in 50% of TS patients, is reported to cause more disability than the motor tics. The comorbidity with anxiety and mood disorders including mania affects the course, treatment, and outcome of tic disorders.

### **GUANFACINE IN COMORBID ADHD & TOURETTE'S SYNDROME**

An open-label study of guanfacine (1.5 mg/d), an  $\alpha$ -adrenergic agonist, in 10 children with TS + ADHD, aged 8 to 16 years, was reported from the Yale University School of Medicine, New Haven, CT, and Johns Hopkins Medical Institutions, Baltimore, MD. At 4 to 20 weeks follow-up, significant decreases were observed in commission errors and omission errors on Continuous Performance Tests, and the severity of motor and phonic tics was also decreased. Side effects occurred in all patients and included transient fatigue, headaches, insomnia, and sedation. (Chappell PB, Riddle MA et al. Guanfacine treatment of comorbid attention-deficit hyperactivity disorder and Tourette's syndrome: preliminary clinical experience. J Am Acad Child Adolesc Psychiatry September 1995;34:1140-1146). (Reprints: Dr Chappell, Pfizer, Building 200, Eastern Point Road, Groton, CT 06340).