Letters to the Editor

Acute Flaccid Paralysis: Guillain - Barre Syndrome with Enterovirus Infection

An eighteen-month-old boy presented with a limp of 4 days dmation, a week following fever, cough and loose stools. Oral polio vaccine (OPV) was administered a month earlier. Systemic examination was unremarkable. He was afebrile, buckled at the knees and muscle stretch reflexes were inelicitable. Laboratory evaluation for porphyria, hepatitis-B, HIV, cytomegalo virus, infectious mononucleosis, collagen vascular disorders, dyselectrolytemia and lymphoreticular malignancies was negative. Cerebrospinal fluid (CSF) contained 3 lymphocytes/mm^3, 113 mg% protein and 54 mg% sugar. Stool viral cultures grew non-polio enterovirus (NPEV). Weakness extended to the upper limbs within a week; respiratory musculature and cranial nerves including facial remained unaffected.

Electrophysiological findings are tabulated (*Table I*). Guillain-Barre syndrome (GBS) was diagnosed, intravenous immunoglobulin (IVIG) infused and progression arrested. With physiotherapy he recovered without sequelae within a month.

Acute flaccid paralysis (AFP) in children has been the focus of the polio eradication initiative of the World Health Organization (WHO). Major diagnostic considerations are GBS and poliomyelitis. Compared with poliomyelitis, GBS has more symmetrical paralysis, greater likelihood of sensory and autonomic disturbances and electroneuromyographic evidence of peripheral nerve demyelination. In vaccinated children, however, poliomyelitis may mimic GBS in symmetry(1). The characteristic CSF albwninocytological dissociation, slow nerve conduction velocities, conduction block and absent F waves on electroneuromyography confmned Guillain-Barre syndrome.

Prodromal infection or vaccination may trigger immune responses causing GBS. A large series from Vellore included a 2-month-old infant(2). Vaccination related GBS has disconcerting implications for immunization programs highlighted by a Finnish study of OPV(3). Reassuringly, despite aggressive polio immunization and surveillance, no increase in pediatric GBS has been reported from India.

Genus Enterovirus comprises polioviruses, group A and B Coxsackie, echoviruses and newer enteroviruses. The latter four are labeled NPEV. Poliomyelitis is caused by poliovirus or, rarely, vaccinia virus. Infrequently NPEVs, particularly enterovirus-71, cause paralysis indistinguishable from poliomyelitis(4) but carrying less probability of bulbar involvement or permanent disability. NPEV was isolated from 191 of 523 children with AFP of undisclosed etiology from Uttar Pradesh(5).

Plasmapheresis and IVIG are the only measures effective in arresting progression of GBS. IVIG is preferred in children since it does not decrease blood volume or require central venous access. It has been safely administered for GBS in children as young as 2 years(6).

We reiterate that GBS mandates consideration in childhood AFP regardless of

TABLE I–*Results of Nerve Conduction Studies on the Ninth day of Illness.*

Nerve	Distal Latency (ms)	Amplitude of CMAP (mv)	Conduction Velocity (m/s)	F wave
Posterior tibial	5.0	1.1	13	absent
	20.0	0.4		
Common peroneal	8.0	0.6	12	absent
	21.0	0.3		
Median	9.8	1.2	17	absent
	15.2	0.8		
Ulnar	6.6	1.5	16	absent
	12.7	1.1		
Sural	–	absent	–	
Ulnar	–	absent	–	
Median	–	absent	–	

CMAP-compound motor action potential; SNAP-sensory nerve action potential; ms-millisecond; m/s metres per second, mv-millivolt, uv-microvolt.

age. IVIG is a therapeutic option in those children with progressive paralysis.

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