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39. Cerebellar Mutism in Children: Report of Seven Cases and Potential Mechanisms

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Cerebellar mutism is a rare finding associated with resection of posterior fossa tumors or cerebellar hemorrhages. Pediatric studies are usually single case reports: a single study re-viewed 15 children, and no study described mutism with trauma. This is a retrospective review of 7 children, aged 3 to 12 years, who developed cerebellar mutism after resection of a posterior fossa mass or as a result of brainstem trauma. During the period reviewed, 1989 to 1994, approximately 210 children had posterior fossa resection at the Childrens Hospital Los Angeles, and 7 developed mutism (an incidence of 3.2%). Six patients had tumors: primitive neuroectoder-mal tumors in 4 and astrocytoma in 2. Three children had hydrocephalus as a result of their tumor. Six children devel-oped mutism within 24 to 48 hours after surgery. In 1, mut-ism occurred 3 years later, from edema within the postopera-tive site. The seventh patient had focal hemorrhage in the cerebellar peduncle. Cerebellar mutism lasted 24 hours in 1

patient, 10 days in a second, and 2 to 8 weeks in the others. Scanning speech was noted in 1 patient during recovery, and 3 had "personality changes." A review of the literature re_vealed 23 children with mutism after resection of a midline cerebellar tumor. The etiology of cerebellar mutism is un_clear: Some authors suggested psychiatric factors, while oth_ers invoked pontine edema. Fraioli and Guidetti reported that stereotactic ablation of the dentate nucleus or its outflow tract, the superior cerebellar peduncle, or both, produced reversible mutism. Therefore, we suggest trauma to these structures, related to the tumor, vasospasm, or retraction dur_ing surgery as an important etiology. Because posterior fossa tumors are common in children, mutism should be recog_nized as an important side effect of surgery.