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# Cerebellar mutism syndrome caused by bilateral cerebellar hemorrhage in adults: a case report and review of the literature

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## Abstract

Cerebellar mutism syndrome (CMS) is a frequent complication of surgical intervention on posterior fossa in children. It has been only occasionally reported in adults and its features have not been fully characterized. In children and in young adults, medulloblastoma is the main reason for neurosurgery. A single case of postsurgical CMS is presented in an adult patient with a cerebellar hemorrhage and a systematic review of the published individual cases of CMS in adults was done. Literature review of individual cases found 30 patients, 18/30 (60%) males, from 20 to 71 years at diagnosis. All but one case was post-surgical, but in one of the post-surgical cases iatrogenic basilar artery occlusion was proposed as cause for CMS. The causes were: primary tumors of the posterior fossa in 16/22 (72.7%) metastasis in 3/30 (10%), ischemia in 3/30 (10%) cerebellar hemorrhage in 3/30 (10%), and benign lesions in 2/30 (6.7%) patients. 8/30 patients (26.7%) were reported as having persistent or incomplete resolution of CMS within 12 months. CMS is a rare occurrence in adults and spontaneous cerebellar hemorrhage has been reported in 3/30 (10%) adult patients. The generally accepted hypothesis is that CMS results from bilateral damage to the dentate nucleus or the dentate-rubro-thalamic tract, leading to cerebro-cerebellar diaschisis. Several causes might contribute in adults. The prognosis of CMS is slightly worse in adults than in children, but two thirds of cases show a complete resolution within 6 months.

**Keywords:** Adult; Cerebellar mutism syndrome; Cerebellum; DAVF; Dural artero-venous fistula; Hemorrhage.