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The Cerebellar Mutism Syndrome: Risk Assessment, Prevention and Treatment

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Abstract

Cerebellar mutism syndrome (CMS) has received increasing attention over the last decades as a complication of posterior fossa tumour surgery in children. Risk factors, aetiological aspects, and treatment measures of the syndrome have been investigated, yet the incidence of CMS remains unchanged. Overall, we are currently able to identify patients at risk, but we are unable to prevent it from occurring.Once CMS sets in, several symptomatic pharmacological treatments have been suggested, but only in smaller case series and not in randomized controlled trials, and it is not clear whether the treatment or time itself had a helpful effect.Within weeks to months, most patients regain their ability to speak after a phase with mutism or severely reduced speech; however, many patients continue to have speech and language deficits. At this point, anti-cancer treatment with chemotherapy and radiotherapy may be of focus more than the prognosis of CMS; however, many patients continue to have speech and language problems for months and years to come, and they are at high risk of other neurocognitive sequelae as well.Without reliable measures to prevent or treat the syndrome, we may look towards improving the prognosis of speech and neurocognitive functioning in these patients. As speech and language impairment is the cardinal symptom and late effect of CMS, the effect of intense and early-onset speech and language therapy as a standard of care in these patients should be investigated in relation to its effect on regaining speech capacity.

Keywords: Cerebellar mutism syndrome; Neurorehabilitation; Paediatric brain tumour; Post-operative speech impairment; Posterior fossa tumour surgery.