

Introduction

Movement disorders have not been reported in patients with intraventricular tumors, but lesions of thalamic subnuclei may cause abnormal involuntary movement disorders such as tremor and myoclonus. Here, we report the first case of cough-induced tremor as a clinical manifestation of intraventricular tumor.

Case description

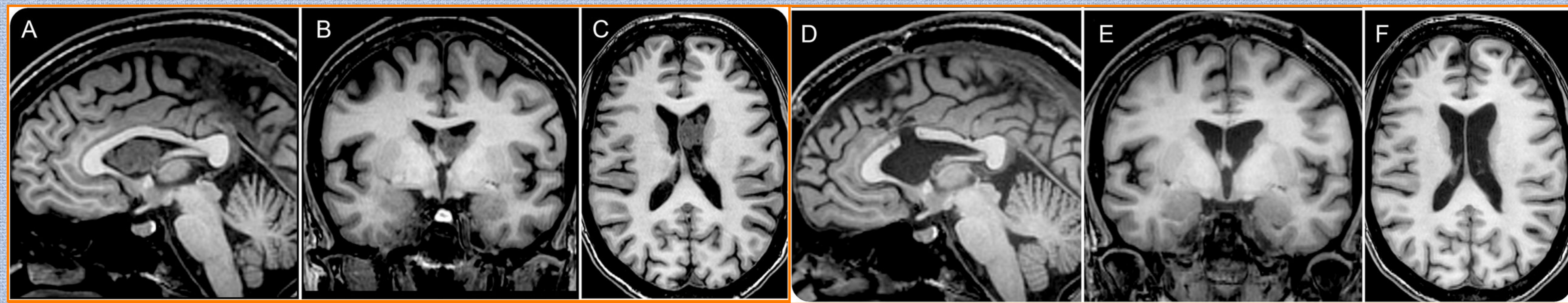
A 39-year-old woman presented with right-hand tremor triggered by coughing. Her examination revealed tremor and irregular myoclonus at rest, and transient right-hand tremor precipitated by coughing. Brain MRI showed a well-circumscribed mass in the left lateral ventricle near the foramen of Monro, which appeared hypointense on T1-weighted imaging and hyperintense on MR T2-weighted imaging with small cystic components. This intraventricular tumor caused a partial obstruction of Monro foramen leading to slight enlargement of left lateral ventricle.



Right-hand tremor

Baseline

Post surgical treatment



Intraventricular tumor causing intermittent hydrocephalus

MRI shows intraventricular mass (A) and Monro foramen partial obstruction (B) leading to slight enlargement of left lateral ventricle (C). Coughing shifts the tumor with complete obstruction to the free flow of CSF in the Monro foramen causing intermittent hydrocephalus. Monro foramen obstruction disappeared after surgical removal of subependymoma (D,E,F).

Discussion

Since intraventricular tumor at the Monro foramen can cause sudden intermittent hydrocephalus and focal thalamic lesions may cause hand tremor, coughing shifts the tumor with complete obstruction to the free flow of CSF in the Monro foramen causing intermittent hydrocephalus and hand tremor in this patient. The tremor disappeared after surgical removal of the subependymoma.

We hypothesize that compression of the ventral intermediate nucleus of the thalamus caused by cough-induced hydrocephalus, with dysfunction of cerebello-thalamo-cortical circuit, may be the mechanism for cough-associated tremor of the contralateral hand.

Conclusions

Cough tremor should be considered as a presenting symptom of intraventricular tumor.

VIDEO
NEUROIMAGES

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Cough tremor as presenting symptom of intraventricular tumor

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References:

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