Extensive Cerebral Venous Thrombosis after Resection of Third Ventricle Colloid Cyst

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Abstract: Context: The third ventricle colloid cyst (CC) is a beniqn growth usually located in the third ventricle and can cause various neurological symptoms, including sudden death. Modern surgical interventions may still result in a wide range of complications and cerebral venous thrombosis (CVT) is among them. Process: A 38-year-old female with an existing diagnosis of diabetes mellitus (DM) and hypothyroidism and a six-month history of headaches, blurred vision, and vomiting presented to our clinic three days after the headaches became excessively severe. Neurological examination on admission revealed bilateral papilledema without any associated focal neurological deficits. Brain computed tomography (CT) and magnetic resonance imaging (MRI) confirmed the presence of a third ventricle colloid cyst and associated non-communicating hydrocephalus involving the lateral ventricles. As a result, the patient underwent emergency bilateral external ventricular drainage (EVD) insertion followed by a third ventricular CC excision under neuronavigation through a right frontal craniotomy. Twelve days post-operatively, the patient developed further headaches, followed by a generalized tonic-clonic seizure that led to no postictal neurological deficits. Nonetheless, computed tomography venography of the brain revealed extensive thrombosis of the superior sagittal sinus, inferior sagittal sinus, right sigmoid sinus, and right internal jugular vein. A newly diagnosed CVT was treated with intravenous heparin. The patient was discharged with warfarin, which was discontinued after 12 months. Ten years after her illness, she remained stable and free from any neurological deficits but still suffered from mild chronic headaches. Outcome: Ten years after her illness, she remained stable and free from any neurological deficits but still suffered from mild chronic headaches. Relevance: A preoperative venous study should be performed in all cases to gain a better understanding of the venous anatomy. We advocate meticulous microsurgical techniques to protect the venous system surrounding the foramen of Monro and reduce the amount of retraction during surgery.

Keywords: CVT, seizures, third ventricle colloid cyst, MRI of brain

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