Cystic cavernoma

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In rare cases, cavernomas may form cystic masses, mimicking other pathologies.

Case reports

A 35-year-old man presented with recurrent seizures, aphasia, and gait disturbance with onset at age 14 years. He had previously undergone surgical drainage of multiple cysts across the brain with suspected parasitic infection. On magnetic resonance imaging, 22 cystic lesions were seen across the brain. A large cyst was located in the midline cerebellum, compressing the fourth ventricle. Occipital craniotomy and transvermian dissection allowed total resection of the cyst along with its wall. The postoperative course was uneventful and symptoms progressively improved. Histological analysis revealed cavernoma. Three more surgeries were performed for removal of large supratentorial cavernomas.

In patients with cystic lesions of the brain, the neurosurgeon should consider the possibility of cavernoma. Total excision along with the cyst wall is crucial for timely diagnosis and therapy. [1)]

Cystic CM arising in the CPA and not involving the internal auditory canal and dura of the skull base are extremely rare. The authors present an uncommon large cystic progression of a cavernous malformation at the level of the trigeminal root entry zone evolving to severe trigeminal neuralgia and brainstem compression.

A 62-year-old female presented a sudden onset of left trigeminal neuralgia, caused by a large cystic lesion at the level of the root entry zone of the left 5th nerve. On neurological examination, she showed slight gait ataxia and hypoesthesia on the left hemiface (on the first and second trigeminal branches). Other cranial nerves were in order. Magnetic resonance imaging showed a large cystic intracranial mass, with a small solid portion, leading to brainstem compression.

Results: Microsurgical removal of the lesion was performed via retrosigmoid approach, with

intraoperative monitoring of somato-sensory evoked potentials, facial, and cochlear nerves. The posterior-medial portion of the lesion was solid, whereas the main portion was cystic, containing xanthochromic fluid. The small solid lesion continued with a thin capsule of a large cyst adherent to brainstem, cerebellar hemisphere, and trigeminal nerve entry zone. A big draining vein arising from the solid part of the lesion runned parallel to brainstem. The mass was piecemeal totally removed.After surgery the patient recovered both left trigeminal neuralgia and hypoesthesia; ataxia was significantly relieved too. Postoperative magnetic resonance imaging confirmed the total removal. Histopathological features were consistent with a CM. At 6-month follow-up, patient's symptoms at the presentation had resolved.

The authors present a very rare patient of large cystic cavernous malformation at the level of the trigeminal root entry zone presenting with sudden onset of trigeminal neuralgia. Even if it has not established imaging features, a cystic cavernoma of the cerebello-pontine angle may be suspected when a cystic mass is present, not involving the internal acoustic meatus nor the skull base dura mater. Careful microneurosurgical technique and monitoring of cranial nerves allow good long-term results [2)].

A case of a previously well 13-year-old male who presented with symptoms secondary to a cystic lesion of the fourth ventricle compressing on his brainstem. He underwent stereotactic aspiration of the cystic lesion and insertion of an Ommaya reservoir in the same setting. Postoperatively, his symptoms improved. The cyst fluid did not yield any positive cytology or culture results. A repeat MRI brain did not demonstrate evidence of any underlying lesion. However, the patient was readmitted for hemorrhage into the region of his previous fourth ventricular lesion. Surgical evacuation of the haematoma was performed and intraoperative tissue was sent for pathological interrogation. The final histology reported a cavernoma.

This is an unusual presentation of an intracranial vascular anomaly in a pediatric patient. Key features of the case include the diagnostic dilemma and management challenges faced from a neurosurgical perspective [3)].

A case of two cystic cavernous angiomas after radiation therapy for atypical meningioma in adult woman. This is the first case of cavernous angioma after radiotherapy for low grade meningioma. A 39-year-old, Latin american woman was operated on for a frontal atypical meningioma with intradiploic component and adjuvant radiotherapy was delivered (6000 cGy local brain irradiation, fractionated over 6 weeks). Follow-up MR imaging showed no recurrences of the tumour and no other lesions. Ten years later, at the age of 49, she consulted for progressive drug-resistant headache. MR imaging revealed two new well defined areas of different signal intensity at the surface of each frontal pole. Both lesions were surgically removed; the histopathological diagnosis was cavernous angioma. This is the first case of cavernous angioma after radiation therapy for atypical meningioma : it confirms the development of these lesions after standard radiation therapy also in patients previously affected by non-malignant tumours [4)].

A totally cystic giant cavernous hemangioma is described in a 3-year-old girl. The clinical presentation and computerized tomography findings were both unique. The patient was successfully treated by surgery [5)].

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