Case report: A cerebellar abnormality

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Introduction

Cavernous angiomas are a developmental type of intracranial vascular malformation which can be inherited or idiopathic [1,3,4].

They are formed of a cluster of dilated weak-walled sinusoidal. They often present following a haemorrhagic event in young adults as a range of neurological signs and symptoms, depending on the location of the lesion [1,2,3,4]. They are best evaluated on MRI, which can also reveal associated developmental venous abnormalities (DVAs) [1,3].

Presentation

This case presents a 41-year-old female who attended A&E with a 4-day history of:

- Left arm progressive dyscoordination
- Unsteadiness with falls to her left side
- Frontal headache
- Nausea and vomiting

Examination revealed

- Marked instability on standing causing falls to the left
- Frank dysmetria
- Tremor on the left
- Dysdiadochokinesis on the left

Investigations

CT:
A CTB and CTA showed a 24mm hyperdense mass centred on the superior cerebellar vermis with a focus of coarse calcification in the inferior aspect. No cerebral aneurysm or other vascular abnormality was demonstrated. There was no local mass effect or hydrocephalus.

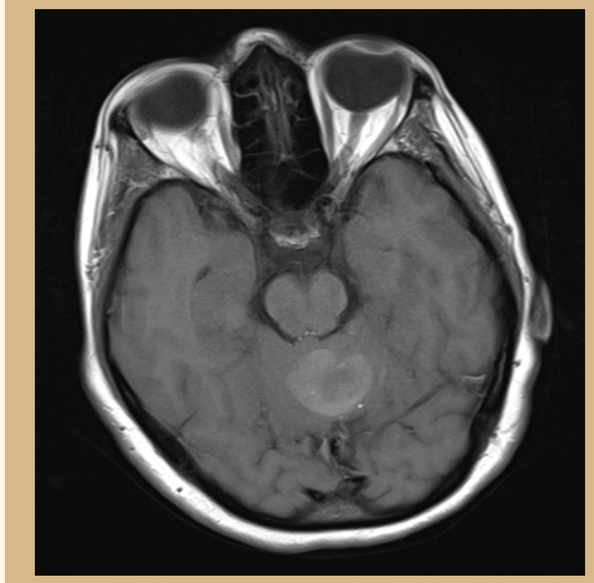

Figure 1: T1 axial

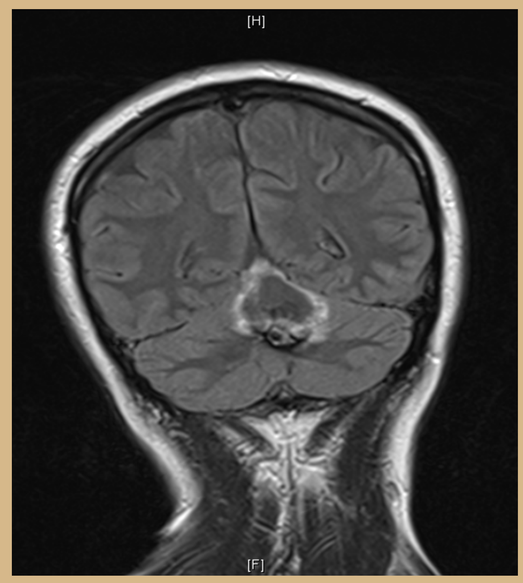

Figure 2: T2 FLAIR coronal

MRI (figure 1 and 2):
This spherical mass was shown to be low signal on T2 and FLAIR imaging with minor high signal change on T1 scans. There was evidence of recent haemorrhage inferiorly which extended into the left cerebellum and subarachnoid space. Inferiorly there was calcification associated with a developmental venous abnormality. This appeared to be an encapsulated haematoma secondary to a cavernous malformation.

Management

She was admitted under the neurovascular surgical team for 2 weeks and treated symptomatically and conservatively with antiemetics and received physiotherapy. Following improvement in her mobility she was discharged to await a repeat MRI scan as an outpatient.

Discussion

Although rare, cavernous malformations are an important cause to consider in young people presenting with stroke symptoms [2]. Due to the familial association it is important to screen other family members [1, 3]. They are normally managed conservatively but surgery may be required in haemorrhage if neurological symptoms or epilepsy persist [1, 3, 4].

Small lesions can present without radiological abnormality, therefore if clinical suspicion remains repeat imaging should be considered [2].

References
[1] https://www.ncbi.nlm.nih.gov/books/NBK430871/ [2] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4543067/ [3] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6553676/
[4] https://www.ahajournals.org/doi/full/10.1161/strokeaha.117.017074