

Spontaneous rupture of superficial temporal artery aneurysm presenting as hemifacial swelling

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DESCRIPTION

A 60-year-old man presented with a day's history of sudden, spontaneous and severe swelling on the left side of the face and the neck. There was no history of trauma, surgery or radiotherapy. On examination, the patient was haemodynamically stable and there was discolouration and tenderness over the left side of the face. The patient was mildly anaemic. An unenhanced CT scan of the head demonstrated a large scalp haematoma in the left temporal region extending inferiorly (figure 1A). A comparison with MRI of the head (figure 1B) performed 2 years ago for epilepsy, revealed a 1.2 cm aneurysm of the superficial temporal artery (STA). This was initially missed by the radiologist and demonstrated in the hindsight only. A CT angiogram of the head and neck confirmed a 2 cm fusiform STA aneurysm (figure 2). There was no active contrast extravasation at the time of the angiogram; however, extensive haematoma in the surrounding tissue indicated a recent rupture. As the extensive haematoma required evacuation, surgical management was favoured over the possible endovascular and percutaneous treatment described previously.^{1,2} The aneurysm was excised and the two ends of the artery ligated. The haematoma was evacuated and the wound was closed primarily over a drain. The patient made an uneventful recovery. Histology

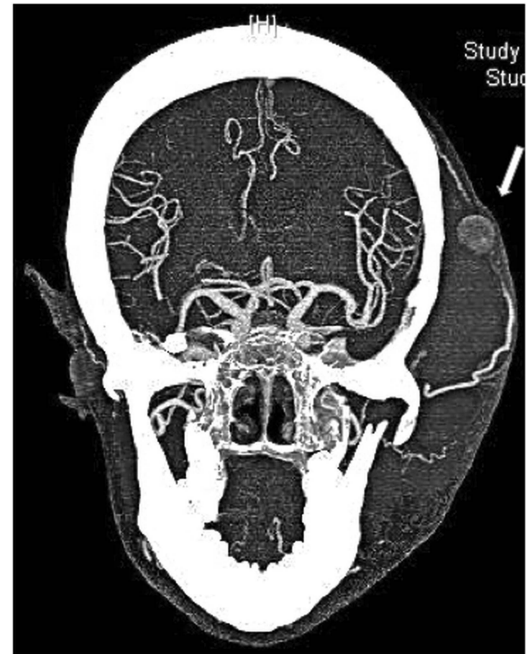


Figure 2 CT angiogram. There is a fusiform aneurysmal dilation of the frontal branch of the left superficial temporal artery (arrow). The STA is a terminal branch of the external carotid artery (ECA). There is no active extravasation of contrast media.

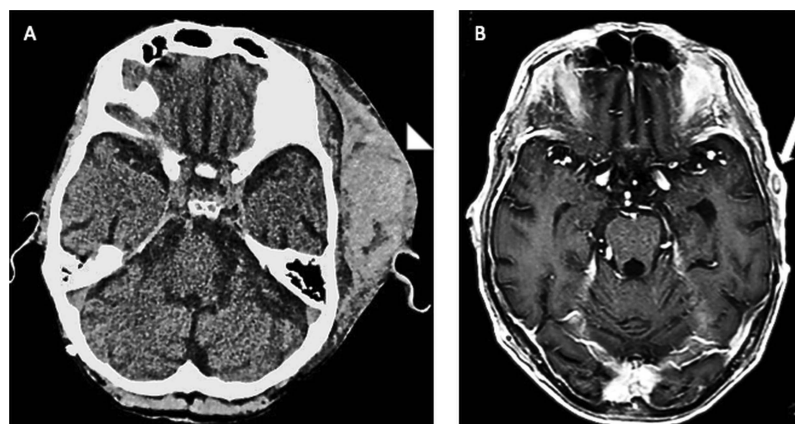


Figure 1 Comparison of the new and old cross-sectional studies of the head. (A) Axial CT scan of the head demonstrates a large scalp haematoma on the left side (arrowhead). (B) Axial T2 MRI of the head performed 2 years ago for epilepsy demonstrates an aneurysmal dilation of the left superficial temporal artery (arrow). This was an incidental finding which was initially missed.



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confirmed a true aneurysm of STA. There are several reports of STA aneurysms.³ However, rupture of an STA aneurysm has not been previously described and this is the first description of hemifacial swelling caused by a ruptured STA aneurysm.

Learning points

- ▶ An aneurysm of the superficial temporal artery (STA) is predisposed to rupture, and hence should be treated electively.
- ▶ It is essential to compare the current with the old diagnostic imaging. The STA aneurysm in this case may have remained unrecognised if the CT scan was not compared with MRI performed 2 years ago.
- ▶ Although rare, a ruptured aneurysm of the STA is an important cause for ipsilateral acute facial swelling. The more common causes include jugular vein obstruction, lymphoedema and inflammation.

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