Image of the month: A hidden bomb behind hypertension

Authors: Yen-Ting Yeh[A] and Wenpo Chuang[B]

A 34-year-old man presented with dizziness and throbbing headache for one day. He also complained of a retro-orbital 'puffed-up' feeling. There was a background, one-year history of hypertension, without regular medication, and his systolic blood pressure at home was usually 140–150 mmHg. The patient also claimed that similar symptoms developed during 'surges' of blood pressure at home.

In the outpatients clinic, his blood pressure was 161/109 mmHg, and he was prescribed with antihypertensive medications. However, he came back the next day with newly developed blurred vision. Physical and neurological examinations were normal. He went on to have a non-contrast computed tomography scan of the brain and this revealed a heterogeneous hyperintense tumour within the sella turcica (Fig 1), and subsequent magnetic resonance imaging confirmed a pituitary tumour with heterogeneous hyperintensity on T2-weighted images (Fig 2) and a ring of gadolinium enhancement around it (Fig 3).

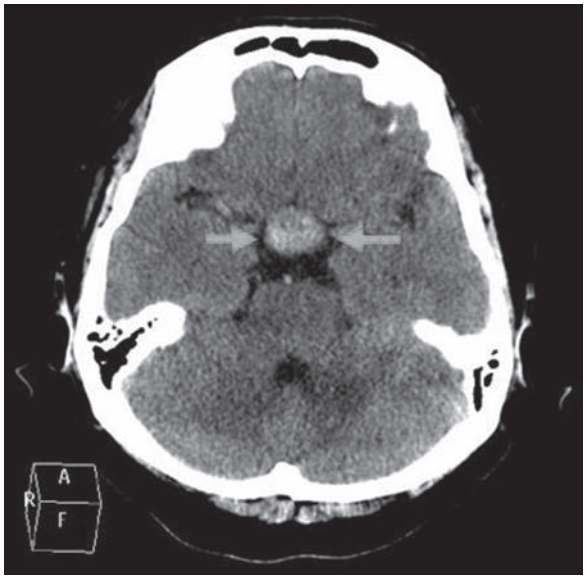

Fig 1. A non-contrast computed tomography scan of the brain showed a hyperintense tumour (arrows) at the sella turcica.

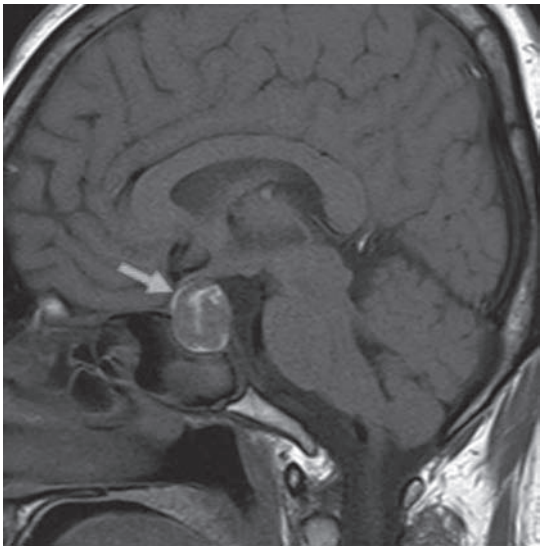

Fig 2. T2-weighted magnetic resonance imaging of the brain in the coronal view demonstrated a 2.3x2.2x1.8-cm pituitary tumour (arrow) with heterogeneous hyperintensity (103x137 mm (96x96 DPI)).

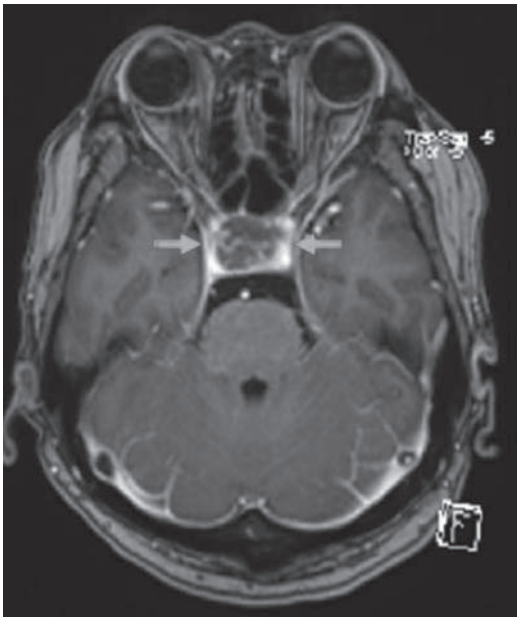

Fig 3. Following contrast injection, a ring of gadolinium enhancement (arrows) around the tumour was also observed (103x137 mm (96x96 DPI)).

Authors: [A]fellowship, Cardiology Division of Cardiovascular Medical Center, Far Eastern Memorial Hospital, New Taipei City, Taiwan; [B]attending physician, Cardiology Division of Cardiovascular Medical Center, Far Eastern Memorial Hospital, New Taipei City, Taiwan

These images unexpectedly revealed pituitary apoplexy, leading to an emergent neurosurgical consultation. The patient received corticosteroid therapy as is standard therapy, but refused to undergo neurosurgical treatment.

Pituitary apoplexy is a rare condition and potentially fatal. Even in patients with a known pituitary tumour, only 0.6–9% developed clinical apoplexy, and the risk of internal haemorrhage is higher in larger tumours.[1] The composite outcome of mortality and disability is approximately 20% in this condition, despite timely surgical intervention.[2]

The classic presentation includes sudden onset of severe headache, nausea or vomiting, decreased level of consciousness, decreased visual acuity, diplopia or cranial nerve dysfunction. However, such a medical emergency can present with only non-specific vague symptoms along with hypertension, as our case did. Clinical vigilance and high suspicion are important and should be within the differential diagnosis of other conditions such as subarachnoid bleeds.[3]

References

1 Murad-Kejbou S, Eggenberger E. Pituitary apoplexy: evaluation, management, and prognosis. *Curr Opin Ophthalmol* 2009;20:456–61.
2 Semple PL, Webb MK, de Villiers JC, Laws ER Jr. Pituitary apoplexy. *Neurosurgery* 2005;56:65–73.
3 Grant, P. Severe, sudden onset headache in a young man: sub-arachnoid haemorrhage vs pituitary apoplexy. *Int J Int Med* 20016;7:1.

Address for correspondence: Dr W Chuang, Cardiology Division of Cardiovascular Medical Center, Far Eastern Memorial Hospital, 13F, 21, Sec 2, Nan-Ya South Road, Ban-Ciao District, New Taipei City, 220, Taiwan.
Email: chuangwp@gmail.com