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Cortical subarachnoid haemorrhage with reversible cerebral vasoconstriction syndrome in an elderly woman

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Accepted 21 February 2017

DESCRIPTION

A woman aged 65 years had a sudden onset of severe headache after swimming. She had prolonged headache; therefore, she presented at the emergency department. During the examination in the emergency department, her physical and neurological examinations were unremarkable. Haematological findings were normal. The CT scan of the head revealed a cortical subarachnoid haemorrhage (cSAH) in the right frontal and left temporal lesion (figure 1A, B). The cerebrospinal fluid analysis revealed normal protein and cell counts. A brain MRI showed only high-intensity changes for cSAH with no findings of microbleeds (figure 1C, D). The magnetic resonance angiography (MRA) showed mild stenotic changes on the right posterior cerebral artery (PCA) (figure 2A). There was no evidence of any aneurysm. Based on the constriction findings, reversible cerebral vasoconstriction syndrome (RCVS) in conjunction with cSAH was suspected, and intravenous nicardipine was initiated followed by oral lomerizine in the same way as previously reported.¹ On day 9, the MRA showed findings of systemic constriction which were particularly

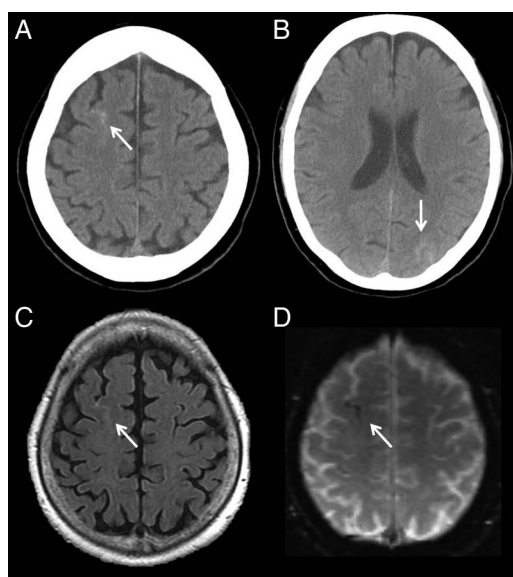


Figure 1 (A and B) CT of the head reveals a mild cortical subarachnoid haemorrhage (cSAH) in the right frontal and left temporal lesion (arrow). (C and D) Brain MRI on admission shows high-intensity changes for cSAH on fluid-attenuated inversion recovery imaging and low-intensity changes on gradient echo T2*-weighted imaging (arrow).

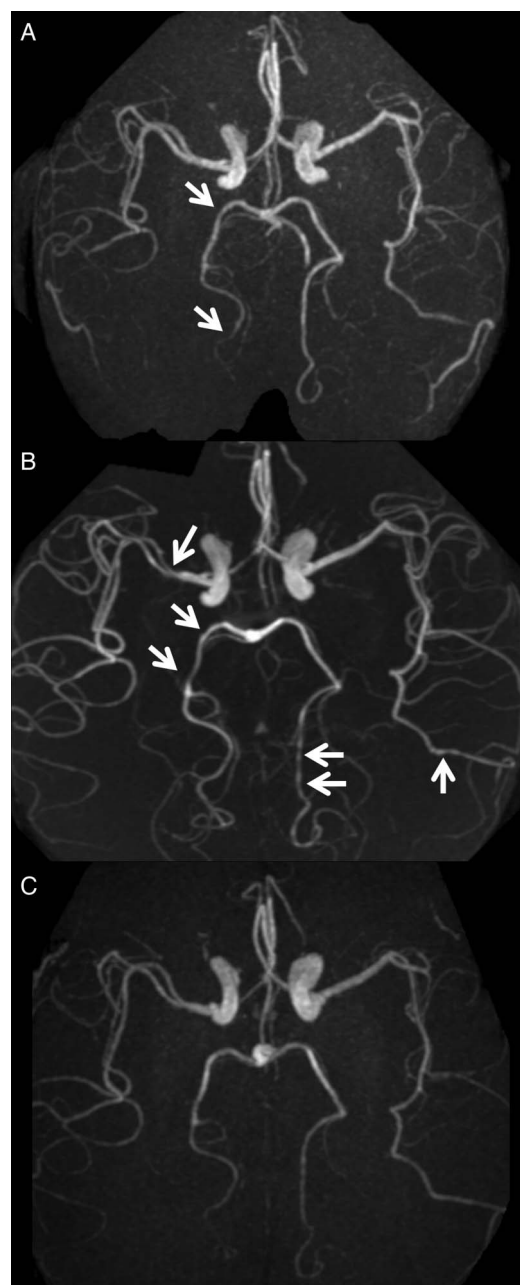


Figure 2 (A) The magnetic resonance angiography (MRA) on admission shows mild segmental stenotic changes in the right posterior cerebral artery (PCA) (arrow). (B) The MRA on day 9 shows the findings of systemic constriction, which are particularly prominent in the right middle cerebral artery and left PCA (arrow). (C) The MRA on day 27 shows improvement in the constriction findings.



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To cite: Chiba Y,
Yamamoto D, Uchiyama T.
BMJ Case Rep Published
online: [please include Day
Month Year] doi:10.1136/
bcr-2017-219319

emphasised in the right middle cerebral artery and the left PCA (figure 2B). On day 27, the constriction findings had improved (figure 2C). The reversible vasoconstriction findings were consistent with RCVS. RCVS and cerebral amyloid angiopathy (CAA) are common aetiologies of atraumatic cSAH.² In younger patients, RCVS is the most common cause of cSAH, and CAA should be considered in older patients, especially in those over 60 years of age.²⁻³ It is unusual that a relatively elderly woman would develop a cSAH with RCVS; however, we should consider the possibility of RCVS, although the patient may not be young.

Learning points

- ▶ Reversible cerebral vasoconstriction syndrome (RCVS) is the most common cause of cortical subarachnoid haemorrhage (cSAH) in younger patients. Cerebral amyloid angiopathy is the most common cause in elderly patients, particularly those older than 60 years of age.
- ▶ However, there have been a few reports in which a case of RCVS presented with cSAH in patients over 60 years of age; therefore, we should consider the possibility of RCVS even though the patient is not young.

Contributors YC was a major contributor in writing the manuscript. DY and TU also treated the patient, and interpreted the patient data. All authors read and approved the final manuscript.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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