

Traumatic Internal Carotid Artery Aneurysm

Lieut Col H S Bhatoe MCh, R V Phadke MD*

Department of Neurosurgery, Command Hospital (CC) Lucknow &
*Department of Neuroimaging, SGP GIMS, Rae Bareilly Road, Lucknow

CLINICAL PROFILE

A 32-year-old male was admitted with two episodes of massive epistaxis over the preceding three months. Each episode was preceded by intense facial pain involving the left frontal and maxillary regions, followed by massive, fresh, bright red hemorrhage from the left side of nose. Epistaxis ceased with nasal packing by the ENT surgeon. He was normotensive, with no history of anticoagulant therapy. He had however suffered from closed head injury two months prior to onset of epistaxis, when there was transient alteration in sensorium, followed by recovery. He also complained of dimness of vision in his left eye following injury. Anterior rhinoscopy during the intervening period was unremarkable. Funduscopy revealed primary optic atrophy on the left side. CT brain was normal. He was investigated further by transfemoral carotid angiography.

IMAGING DIAGNOSIS

Digital subtraction angiography (DSA) of the carotid arteries revealed normal common and external carotid system. There was a large intracavernous aneurysm of the left internal carotid artery, projecting into the sphenoid sinus (Figs 1 and 2).

Diagnosis: Traumatic intracavernous aneurysm of the left internal carotid artery.

DISCUSSION

Epistaxis following head injury is usually mild and due to rupture of the ethmoidal branches of the external carotid artery. Traumatic aneurysm of the ICA projecting into the sphenoid sinus is rare, and usually presents with recurrent massive epistaxis. The lesion can be suspected clinically by Maurer's triad (head injury, unilateral blindness, epistaxis)¹. Initial management consists of hemodynamic stabilization since these patients can present with exanguination, and tamponade to control bleeding. Earlier, definitive treatment initially was in the

Address for correspondence : Lieut Col Harjinder S Bhatoe M S, M Ch, Department of Neurosurgery, Army Hospital (R & R), Delhi Cantt 110010, India. Tel: 91-11-25668095, 25668096, Fax: 91-11-25681893, E-mail: hsbhatoe @indiatimes.com, bhatoe@rediffmail.com



FIGURE 1. DSA showing intracavernous ICA aneurysm

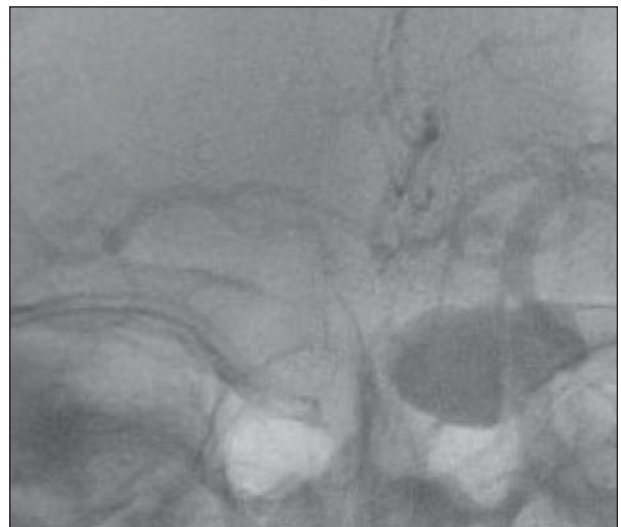


FIGURE 2. DSA showing medial (intrasphenoid) projection of the aneurysm

form of common, or internal carotid ligation and trapping^{2,3}. The aneurysm can now be successfully managed by endovascular intervention such as balloon occlusion or by stenting. Injury to the intracavernous ICA should be kept in mind in head injured patients with massive recurrent epistaxis.

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