

Traumatic rupture of right carotid artery in a car accident

Published on 09.11.2000

DOI: 10.1594/EURORAD/CASE.677

ISSN: 1563-4086

Section: Cardiovascular

Case Type: Clinical Cases

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Patient: 27 years, male

Clinical History:

Traumatic rupture of the right internal carotid artery with pseudoaneurysm and bleeding

Imaging Findings:

The patient was involved into a traffic accident. Sitting in the back he was sleeping when the accident happened but was protected by a safety belt. He was admitted with a large neck hematoma predominantly on the right side; no hemiplegia was present. Direct angiography was performed (Fig. 1) via a right transfemoral access showing an ill-defined margin of the proximal portion of the right internal carotid artery in an ap view with markedly slowed flow in the distal segments of the internal carotid artery (Fig. 1 a). Lateral and oblique views showed large pseudoaneurysm of the internal carotid artery with extravasation (Fig. 1 b) and compression of the true carotid arterial lumen. Nevertheless, the distal segment of the carotid artery remained patent (Fig. 1 c) with no sign of dissection. The patient underwent successful emergency surgery for direct repair of the carotid rupture.

Discussion:

Origin of this traumatic carotid arterial rupture is most likely due to a whiplash injury by the safety belt. The fact that the patient sleeping in a more lying position may have resulted in a more cervical position of the safety belt exposing the carotid artery to direct trauma.

Differential Diagnosis List: Traumatic rupture of the right internal carotid artery with pseudoaneurysm and bleeding

Final Diagnosis: Traumatic rupture of the right internal carotid artery with pseudoaneurysm and bleeding

References:

Baik S, Uku JM, Joo KG.

Seat-belt injuries to the left common carotid artery and left internal carotid artery.

Am J Forensic Med Pathol. 1988 Mar;9(1):38-9. (PMID: [3354521](#))

Figure 1

a



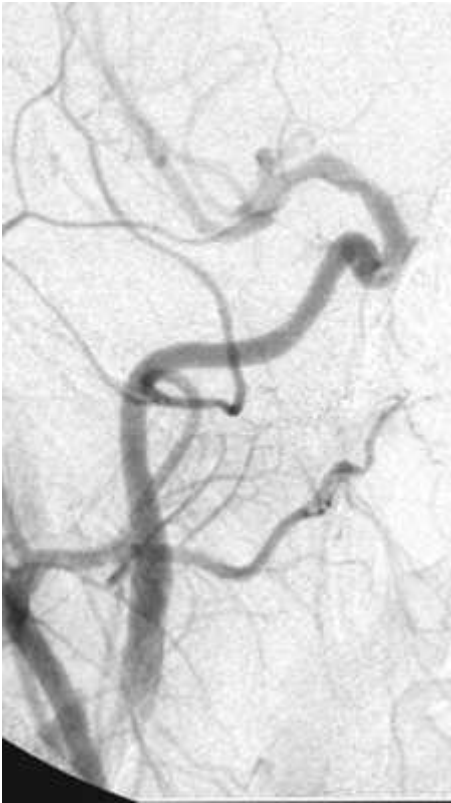
Description: AP view show ill-defined margins of the internal carotid artery with some enlargement and slowed flow within the distal arterial portion **Origin:**

b



Description: Lateral view reveals pseudoaneurysm of the internal carotid artery with extravasation and compression of the true lumen of the carotid artery **Origin:**

c



Description: The distal portion remained patent with no sign of additional dissection or thrombosis

Origin: