Spontaneous innominate artery dissection

A 44-year-old man, smoker was admitted to the Emergency Department, complaining of temporary syncopal attack. He also reported a mild right shoulder pain for the past 4 days without any trauma. He had a blood pressure of 140/80 mm Hg in both arms and a regular pulse.

Imaging Findings:

Chest radiography showed a widened mediastinum. Therefore, the patient underwent an urgent contrast-enhanced chest multidetector computed tomography (MDCT), that revealed a spontaneous innominate artery dissection with an extension to the right common carotid artery and an anterior mediastinal haematoma. The dissection was localised in the level where the innominate artery branched from the aortic arch without evidence of extension of the dissection to the aortic arch and to the descending aorta. Although the dissection extended to the right common artery, CT examination of the head did not reveal any infarct, due to the low sensitivity of the examination to depict the hyperacute ischaemic stroke.

Discussion:

Spontaneous innominate artery dissection is an extremely infrequent entity that requires prompt diagnosis and urgent care. Causes of innominate artery aneurysm mainly include trauma, atherosclerotic degeneration and infection [1]. The clinical presentation of innominate artery aneurysm depends on their extent and usually includes symptoms due to compression and/or due to arterial insufficiency to the brain or upper limbs. Patients usually present with paroxysmal cough, dysphagia, hoarseness, haemoptysis, dysfunction of the branchial plexus and transient ischaemic attacks [2]. In our case, the patient presented with syncope because of the extension of the dissection to the right common carotid artery, which lead to impaired cerebral blood flow. Treatment includes early surgical intervention with high operative mortality rates [3]. MDCT is a rapid, noninvasive method for evaluation of innominate artery dissection and provides an illuminating visualisation of the arteriopathy to plan therapy. In conclusion, the innominate artery dissection is an extremely rare and serious condition without specific clinical symptoms and can lead to death, even with optimal treatment.

Differential Diagnosis List: Innominate artery dissection (with an extension to the RCCA), Aortic dissection (especially type A), Carotid artery dissection
Final Diagnosis: Innominate artery dissection (with an extension to the RCCA)

References:


Description: CT scout view of the chest showed a widened mediastinum. Origin:
Description: Coronal image showing the innominate artery dissection. Origin:
Figure 3

Description: Transverse image showing the dissection. Origin:
Figure 4

Description: Transverse image showing the dissection. Origin:
Figure 5

Description: Coronal image showing the innominate artery dissection and the extension of the dissection to the right common artery. Origin:
Figure 6

**Description:** Coronal image showing the innominate artery dissection with an extension to the right common carotid artery. **Origin:**
Description: Transverse image showing the extension of the dissection to the right common carotid artery. Origin:
Description: Transverse image showing the extension of the dissection to the right common carotid artery. Origin:
Description: Transverse image showing the aortic arch without evidence of dissection. Origin:
Figure 10

Description: Transverse image showing the aortic arch without evidence of dissection. Origin: