

# Unusual cause of back pain and dysphagia: a Kommerell aneurysm

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Accepted 22 July 2020

## DESCRIPTION

An 85-year-old woman came to our emergency department because of back pain and dysphagia that started a few hours before. As relevant in history, the patient had an active follicular lymphoma treated with bendamustine (90 mg/m<sup>2</sup> every 28 days up to three cycles). A saccular aneurysm of the upper wall of the aortic arch with anterior to posterior diameter of 6.5 cm was detected on CT; the volume-rendered reformation of a CT scan performed about a year earlier to stage the lymphoproliferative disease, confirmed the presence of an aberrant right subclavian artery without other relevant findings (figure 1). The age and the comorbidities, especially the unfavourable prognosis of lymphoma, advised against a surgery approach, neither for a hybrid repair attempt (endovascular and open technique).<sup>1</sup> One month later, the patient died for a haemorrhagic shock, most likely due to aneurysm rupture (autopsy not performed). The aneurysm that developed in few months, involving the origin of the anomalous subclavian artery (lusory artery) could be defined as a saccular Kommerell aneurysm. This condition must be differentiated from the saccular aneurysm of the thoracic aorta; early detection is crucial because Kommerell aneurysms have a higher risk of rupture. Another critical differential diagnosis is with uncomplicated

## Learning points

- ▶ Back pain is a common symptom of presentation to emergency department which can underline a life-threatening disease.
- ▶ Saccular Kommerell aneurysm represents a challenge on imaging, mimicking conditions such as saccular aneurysm of the thoracic aorta or dilated Kommerell diverticulum.

Kommerell diverticulum.<sup>2</sup> The diverticulum could be congenital or acquired and can occur in both the left and right aortic arch, from which an aberrant subclavian artery rises to the contralateral side. CT or MRI can provide details of the aneurysm or the diverticulum and its relationship with surrounding organs.<sup>3</sup> An aneurysm of a Kommerell diverticulum is also defined Kommerell aneurysm. Recent histological studies reported the presence of cystic medial necrosis into the diverticulum wall, which might explain the reported high rates of aortic dissection and rupture associated with the diverticulum. Interestingly, in the case described, there was a recent radiological examination that excluded the presence of a pre-existing diverticulum.

**Contributors** GP, GPM and FM were involved in the care of the patient, GPM and MM wrote the paper, all the authors reviewed and approved the final version of the manuscript.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Next of kin consent obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

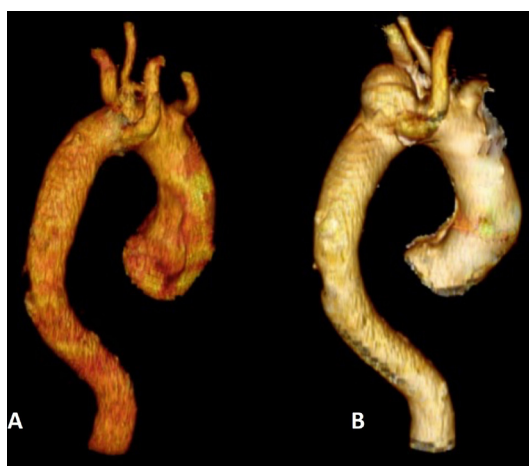
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**Figure 1** Aberrant right subclavian artery without other relevant findings (A); a year later, an aneurysm was developed, involving the origin of the anomalous subclavian artery (saccular Kommerell aneurysm) (B).



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**To cite:** Mattioli M, Pagliariccio G, Martino GP, et al. *BMJ Case Rep* 2020;**13**:e237337. doi:10.1136/bcr-2020-237337

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