Rare disease

Haemoptysis from an innominate artery aneurysm

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DESCRIPTION

An elderly man with a past medical history of hypertension and non-ischaemic dilated cardiomyopathy with automatic implantable cardioverter defibrillator presented to our institution with sudden onset haemoptysis and hoarseness of voice.

CT of the chest with intravenous contrast showed clear lung fields and an aneurismal mass arising from the innominate artery. CT angiograph with three-dimensional reconstruction (figure 1) confirmed a 5 cm multi-lobulated aneurysm arising from the lateral aspect of the innominate artery and a fistula was communicating with the trachea.

Figure 1 CT angiogram showing innominate artery aneurysm.

Figure 2 After stent deployment, contrast can be seen leaking into the aneurysmal sac.

Laryngoscopy showed right recurrent laryngeal nerve involvement with vocal cord palsy, which was likely due to the mass effect from the aneurysm. Physical examination and lab testing was negative for connective tissue disorders and the aneurysm was believed to be secondary to atherosclerosis.

Due to severe dilated cardiomyopathy, the patient was at high risk for an emergent open surgical repair and endovascular repair was, therefore, undertaken. The aneurysm was successfully treated with stent grafting and coiling technique. A covered stent was placed within the innominate artery from its origin at the aortic arch to the level of right common carotid (figure 2). The aneurysmal sac was then successfully coiled (figure 3). Repeat CT angiography at 3

days revealed a type 1 endoleak (leak due to incomplete seal at the ends of the graft). Repeat intervention was performed and endograft was redilated to successfully close the type 1 endoleak. The patient was safely discharged after 1 week and an outpatient bronchoscopy was performed to evaluate for other potential sites of haemoptysis and none was found.

In conclusion, endovascular management of innominate artery aneurysms is a safe alternative to open thoracotomy in high-risk surgical candidates.

Competing interests None.

Patient consent Obtained.

Figure 3 After coiling, contrast is no longer leaking into the aneurysmal sac.

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