

A leaking aortic aneurysm presenting as a recurrent neck swelling

MOHAMED EL-NAGGAR, F.R.C.S., LIAM FLOOD, F.R.C.S.

Abstract

We present a case of an 82-year-old lady with recurrent neck swelling and a history of intermittent stridor who subsequently developed a contusion over her lower neck and upper chest. The patient collapsed on her way to have a CT scan and died 24 hours later of a leaking aortic aneurysm. At initial presentation the complete resolution of poorly localizing symptoms and signs almost allowed her discharge from hospital.

Key words: Aneurysm; Neck

Case report

An 82-year-old lady was referred by her GP as an emergency to the Department of Otolaryngology, North Riding Infirmary. The cause of her referral was the sudden development of a neck swelling on the right side, associated with an acute onset of difficulty in breathing. This incident happened two hours before her arrival in hospital while she was watching television and resting. She was otherwise a very fit lady who was a non-smoker, non-drinker with no history of any cardiovascular or other medical problems and not on any medication.

On arrival at the ENT casualty department there was no evidence of respiratory distress. Neck examination was normal. Fibreoptic endoscopy did not reveal any abnormality in the larynx or pharynx. Being intrigued by the history, we decided to admit the patient for overnight observation which was uneventful and without any respiratory distress. Her vital signs remained stable: blood pressure 180/90 mm Hg pulse 90/minute and respiratory rate 14 minute. We decided to discharge her and review her as an outpatient.

At discharge, while still in the hospital car park, she developed another attack of respiratory distress associated with the sudden appearance of a neck swelling on the right side. She was immediately readmitted. Her neck showed a diffuse bulge mainly in front of the sternomastoid muscle. She had mild stridor which soon disappeared on rest. In about one hour the neck swelling also disappeared. Plain X-rays of the neck and chest were taken (Figures 1 and 2). These showed widening of the superior mediastinum with evidence of curvilinear calcification. The lateral view of the neck also showed widening of the prevertebral soft tissue. Gradually the patient started to show evidence of a contusion over the lower neck and the manubrium sterni (Figure 3). Fibreoptic endoscopy was repeated showing contusion and swelling of the posterior pharyngeal wall mainly in the hypopharynx. The larynx appeared normal. Neck examination including auscultation failed to reveal any abnormality. Arrangements for an urgent CT scan were made.

On her way to the Radiology Department, the patient collapsed with acute chest pain and the on-call physicians were summoned. Assessment showed her to be dyspnoeic, pale and diaphoretic. There was no evidence of a neck swelling at this time but the discolouration on the lower neck and chest became

quite remarkable. Blood pressure was 73/60 mmHg, pulse 120 minute, regular but of low volume, respiratory rate 22 minute. The patient had mild stridor. Auscultation of the heart did not reveal any abnormality. Chest examination revealed normal air entry with no evidence of any adventitious sounds. Electrocardiography did not reveal any evidence of acute ischaemic changes. The cardiothoracic surgeons recommended maintaining her blood pressure between 80 and 90 mmHg with the use of beta-blockers. The diagnosis of a leaking thoracic aortic aneurysm was made on clinical and radiological grounds.

The patient's general condition gradually picked up and her blood pressure was maintained at 80 mmHg. However 24 hours later she died peacefully after developing a period of very shal-

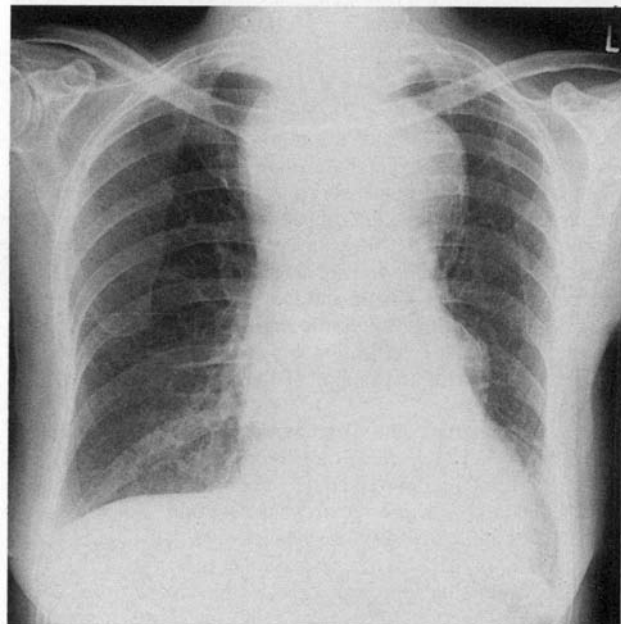


FIG. 1

Plain X-ray of the chest (postero-anterior view) showing superior mediastinal swelling.



FIG. 2

Plain X-ray of the neck (lateral view) showing widening of the prevertebral soft tissue.

low breathing followed by terminal apnoea. There was no neck swelling at the time of her death. Her relatives refused to consent to a postmortem examination.

Discussion

Atherosclerosis is by far the most frequent cause of aortic disease and thus of aneurysm. Since atherosclerosis tends to spare the ascending aorta, aneurysms attributable to this process are characteristically located in the arch and descending segments (Lindsey *et al.*, 1990). Many, perhaps most, thoracic aneurysms are asymptomatic and are detected incidentally as a result of a chest radiograph (Eagle and De Sanchis, 1988; Lindsey *et al.*, 1990). On a plain X-ray, aortic aneurysm frequently presents as peripheral linear calcification which is a considerable aid in the identification of the nature of the opacity (Grainger and Pierce, 1988).

When symptomatic, the symptoms and signs of thoracic aneurysms are usually related to the size of the lesion. Symptoms described in the literature include wheezing, cough, dyspnoea, stridor, haemoptysis and recurrent pneumonia. When clinical and simple radiological tests are inconclusive, then angiography, CT scanning or MRI may be necessary (Lindsey *et al.*, 1990).

In this patient the appearance of the contusion over the chest prompted concern. The concomitant retropharyngeal swelling and bruising of the posterior pharyngeal wall suggested a spontaneous retropharyngeal haematoma which has in some cases been associated with contusion of the anterior neck and chest wall (Saunders and Cooke, 1964). Investigation of these idiopathic bleeds may however reveal significant underlying pathology such as carotid aneurysm (Dingle *et al.*, 1993). In this case it was the combination of severe chest pain radiating to the back, radiological findings indicative of a thoracic aneurysm and the extent



FIG. 3

Photograph of the patient showing discolouration on the front of the chest and lower neck.

and location of the contusion that prompted both the physician and cardiothoracic surgeon consulted to make the clinical diagnosis of a leaking thoracic aortic aneurysm. Angiography was considered too risky at her age and the patient collapsed on her way to have a CT scan.

Pannekock *et al.* (1991) reported a case of a thoracic aneurysm presenting as a suddenly swollen neck with acute terminal respiratory failure due to massive haemoptysis. Our case was less dramatic at presentation and the symptoms were not localized at the site of the primary pathology. Presentation showed the otolaryngological symptoms of a recurrent, temporary neck swelling, suprasternal bruising and stridor, rather than cardiothoracic features such as haemothorax or chest pain. The potential for a missed diagnosis is obvious, and diagnosis was fortuitous in this case.

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Address for correspondence:

Mr L. M. Flood, F.R.C.S., Consultant ENT surgeon,
North Riding Infirmary,
Newport Road,
Middlesbrough,
Cleveland TS1 5JE.