

Retropharyngeal haematoma: a diagnosis for concern?

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Abstract

Three cases of retropharyngeal haematoma are described. In one case there was underlying aneurysm of the carotid artery which could have led to significant morbidity if undetected.

Key words: Haematoma, retropharyngeal

Introduction

Retropharyngeal haematomata are rare. Their presentation depends upon their size, with swelling in the neck, dysphagia, or even dyspnoea. On examination a mass may be palpable in the neck, and visible in the pharynx. Plain lateral radiography may show anterior displacement of the trachea and CT scanning, evidence of haematoma in the retropharyngeal space.

Retropharyngeal haematomata occur spontaneously, secondary to either trauma or to an underlying medical condition such as a bleeding diathesis. In many cases they will resolve with conservative management; however, if large, they may require surgical intervention.

Case 1

A five-year-old girl was admitted with a two-week history of neck stiffness. She had been fighting with her sister and had been kicked in the neck. She had no dysphagia and no respiratory difficulties.

On examination she was afebrile. She was reluctant to move her head and held her neck flexed. There was no palpable abnormality in the neck, but she refused to allow examination of her mouth and pharynx. A lateral soft tissue X-ray showed considerable prevertebral swelling and reversal of cervical lordosis (Fig. 1). CT scan showed ill defined thickening of the prevertebral soft tissues. She was managed conservatively. Her neck movement returned to normal and subsequent lateral X-ray showed complete resolution of the prevertebral swelling.

Case 2

A 45-year-old man was admitted after developing swelling in the right side of his neck following a bout of coughing. He found swallowing difficult and was slightly hoarse. There was a family history of neurofibromatosis, and the patient was known to suffer with the disease, although he was symptom free.

On examination he had a 7–8 cm tender fluctuant swelling palpable at the anterior border of the right sternocleidomastoid muscle. Indirect laryngoscopy revealed a swelling extending from the right side of the pharynx to the pyriform fossa. The airway was uncompromised. A CT scan showed a small haematoma in the right parapharyngeal space extending posteriorly across the midline and a less dense haematoma extending superiorly (Fig. 2). The patient was managed conservatively and discharged two days later. A contrast enhanced CT scan performed at a later date showed an aneurysm containing clot

arising from the internal carotid artery (Fig. 3). At this time a 2 × 2 cm pulsatile mass was also palpable in the neck. Angiography was performed and demonstrated a wide necked partially thrombosed aneurysm extending from the bifurcation of the common carotid artery to just beneath the base of the skull (Fig. 4). The patient was admitted to the regional centre for vascular surgery and underwent exploration of the carotid artery. The aneurysm was found to involve a large segment of the wall of the internal carotid artery extending to the first cervical ver-



FIG. 1

Case 1. Plain film. Lateral soft tissue of neck.



FIG. 2
Case 2. CT neck.

tebra. This made it impossible to clip or repair. Intraoperative angiography showed the aneurysm to have increased in size since the previous investigation and it was embolized using numerous coils (Fig. 5). The patient made an uneventful post-operative recovery and had no residual neurological deficit.

Case 3

A 51-year-old man turned suddenly whilst showering and felt a sharp pain in the left side of the neck. He then found he had mild dysphagia with a feeling of a lump in the left side of his throat.

On examination he was found to have a smooth swelling pushing the lateral pharyngeal wall medially. It extended from the postnasal space to the level of the piriform fossa. There was superficial mucosal ulceration. The patient was admitted and given antibiotics. He settled with conservative treatment and was discharged the following day. Contrast enhanced CT scan showed no abnormality in the neck.

Discussion

The anatomy of the parapharyngeal space is not easily under-

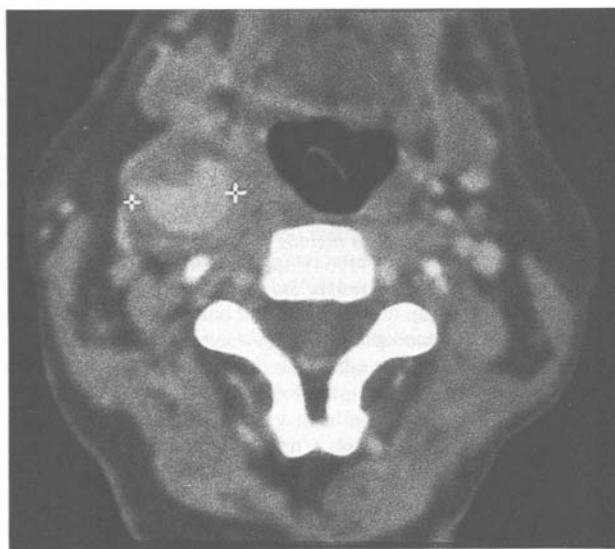


FIG. 3
Case 2. CT neck with contrast.

stood. Malgaigne in 1838 described the cervical fasciae as 'appearing in a new form under the pen of each author who attempts to describe them' (Grodinsky and Holyoke, 1938). The retropharyngeal space is a space lying between the prevertebral fascia and pharyngeal fascia which overlies the pharyngeal constrictor muscles. It is limited laterally by the carotid sheath (but is not completely separated from the posterior triangle of the neck), and superiorly by the base of the skull. Inferiorly it extends to the superior mediastinum. The space is filled with loose areolar tissue which allows movement of the pharynx on swallowing. In infancy it may contain lymph nodes. The parapharyngeal space is connected with the retropharyngeal space medial to the carotid sheath. It extends anteriorly to the pterygoid muscles and laterally to the ascending ramus of the mandible and deep lobe of the parotid. It too contains loose areo-



FIG. 4
Case 2. Angiogram right carotid system.

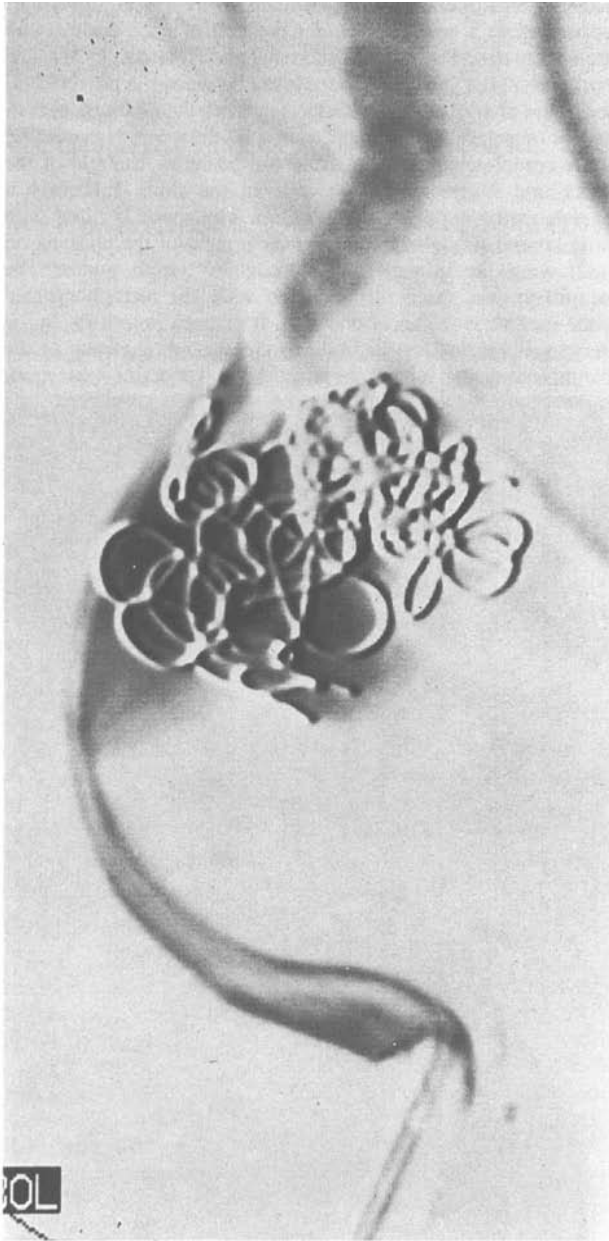


FIG. 5

Case 2. Post-embolization films of right carotid aneurysm.

lar tissue with arteries, veins, lymph nodes and nerves. The differential diagnosis of lesions in this area lies between infection, tumour and bleeding. The history and speed of onset in all three cases suggested bleeding and haematoma formation.

Retropharyngeal haematomata are rare. They have been described secondary to cervical injury (Irvine, 1984), in patients on anticoagulants (Owens *et al.*, 1975), and in patients with polycythemia rubra vera (Mackenzie and Jellicoe, 1986). Spontaneous retropharyngeal haematomata are even more rare. Sandor and Cooke in 1984 describe three cases of 'cervico-mediastinal' haematoma (Sandor and Cooke, 1964). In all three cases, in addition to anterior displacement of the trachea, there was bruising over the neck and chest, appearing within 48 hours. In our three cases no bruising was visible and it is probable that

the haematomata described by Sandor and Cooke extended into different tissue planes. A report in 1975 summarized 19 cases of retropharyngeal haematoma that had been reported in the literature between 1934 and 1975 (Owens *et al.*, 1975). There were six deaths amongst this group as a direct result of the retropharyngeal haematoma. Six cases were secondary to trauma (including iatrogenic trauma), three were secondary to bleeding diathesis (two as a result of Warfarin treatment), three were secondary to aneurysms in the neck, one to a retropharyngeal abscess and one to a parathyroid adenoma. Five could be classified as spontaneous retropharyngeal haematoma. On reviewing recent literature there are two subsequent reports of retropharyngeal haematoma, one following blunt trauma to the neck requiring tracheostomy (Irvine, 1984), and the second in a patient with polycythemia rubra vera in which intubation was necessary to maintain an airway (Mackenzie and Jellicoe, 1986). Death in this case was due to a ruptured spleen.

In none of our cases was the haematoma so severe as to require endotracheal intubation or tracheostomy. While initial history and examination suggested spontaneous retropharyngeal haematoma in two cases, in fact subsequent more detailed investigations revealed an underlying cause in one case (*Case 2*). There is a recognized association between neurofibromatosis and vascular aneurysms, although there are no reports of carotid aneurysms in the neck causing retropharyngeal haematoma. In the case where an aneurysm was detected by CT scanning, no palpable pulsatile mass was present in the neck at the time of presentation, probably due to the presence of extensive haematoma. However, subsequently as the haematoma resolved a 2–3 cm mass became palpable. It is conceivable that the consequences of the bleed from this aneurysm could have been much more severe with airway compression or cerebral infarction. In view of this the patient underwent more extensive investigation and surgery. As a result of our findings in this case, the third case was also investigated with a CT scan. However, no abnormality was found.

Although rare, an aneurysm of the carotid artery should be considered as a cause of retropharyngeal haematoma.

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