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View from Within: Radiology in Focus

Venous haemangioma of the neck and mediastinum

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Abstract
A case of cervico-mediastinal venous haemangioma with diffuse upper respiratory airway involvement is reported. The lesion was considered to be an ordinary supraglottic haemangioma at first. We recommend that adult cases of laryngeal haemangioma should be carefully examined for extra-laryngeal lesions.

Introduction

Laryngeal haemangiomas usually occur in infants and pregnant women (Friedmann and Ferlito, 1988). They are a well-known cause of upper respiratory airway obstruction and haemorrhage (Brodsky *et al.*, 1983). A case of cervico-mediastinal venous haemangioma with diffuse upper respiratory airway involvement is presented here. In this case, we initially considered the lesion to be an ordinary supraglottic haemangioma. However, further examination revealed the true nature of this lesion. Its clinical presentation and imaging findings were quite unqiue.

Case report

A 49-year-old woman presented with a six-month history of mild recumbent dyspnoea in May, 1989. She had also noticed a change in voice quality. ENT examination revealed a bluish smooth sessile mass on the right ventricular fold and left arytenoid in the larynx. These showed a marked increase in size in the supine position (Figs. 1 & 2). The other physical examination and laboratory tests were within normal limits. Fibreoptic bronchoscopy revealed numerous telangiectasiae in the tracheal wall from the subglottis to the carina (Fig. 3). Computed tomography with contrast enhancement revealed that the highly vascular mass extended from the right side of the hyoid bone to the anterior mediastinum with laryngo-tracheal involvement. Magnetic resonance imaging showed this lesion as a relatively low-signal-intensity mass on T_1-weighted images and high-signal-intensity mass on T_2-weighted images (Fig. 4). Digital subtraction angiography via femoral catheterization

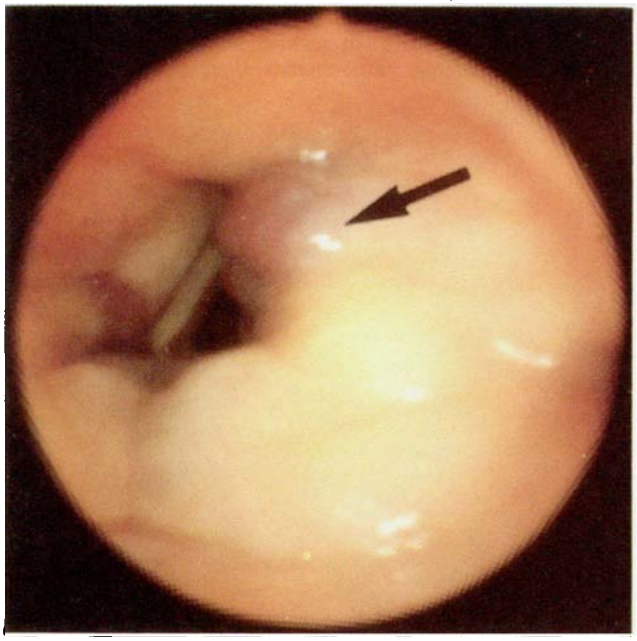

Fig. 1

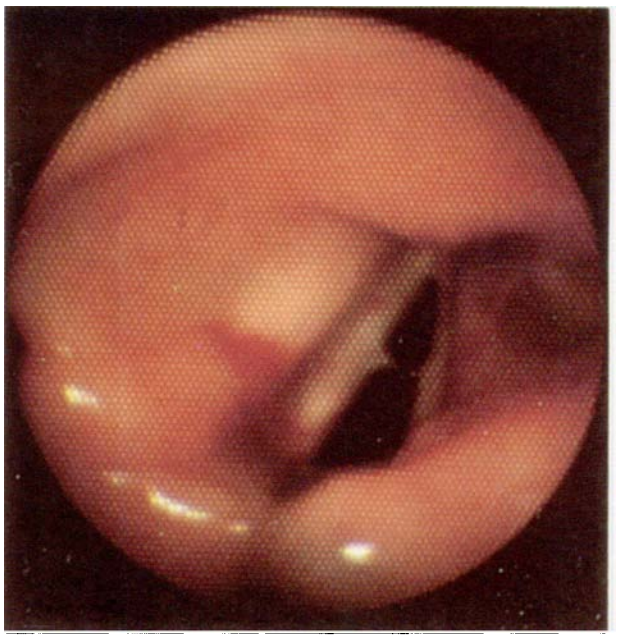

Fig. 2

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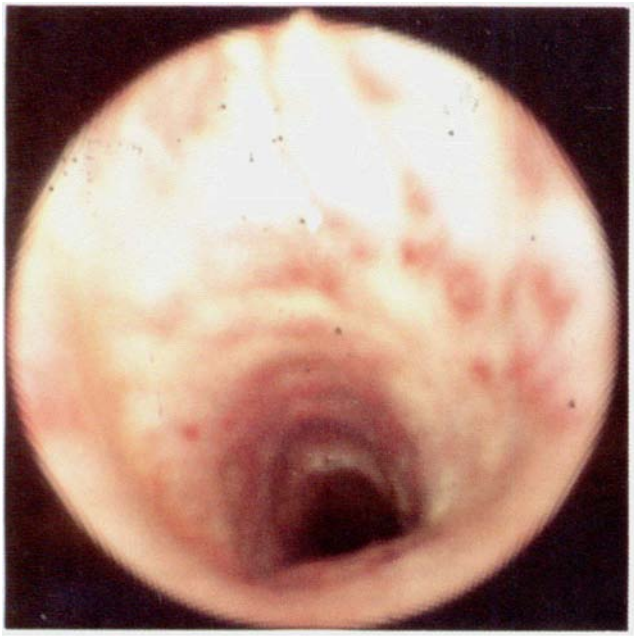

Fig. 3

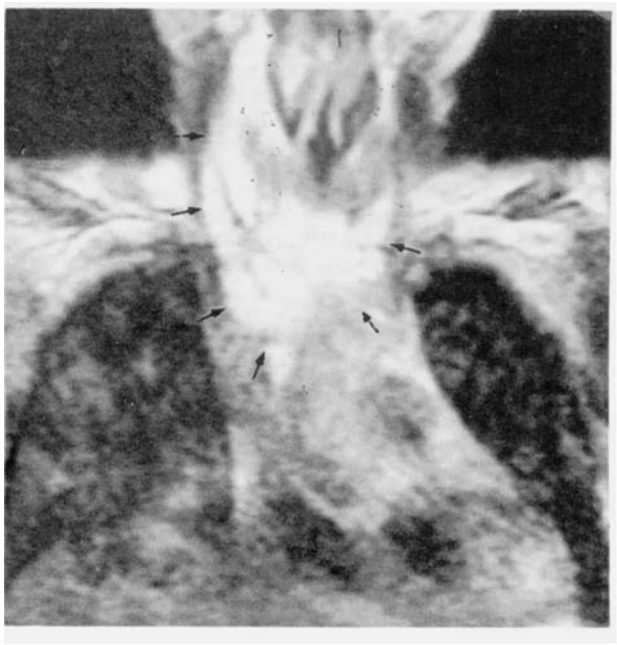

Fig. 4

with right carotid and subclavian injections was performed. We could not find either a marked vascular stain or feeding vessels. Thus, we considered the lesion to be a highly vascular tumour with a low blood flow rate, as is the case with venous haemangioma.

Under general anesthesia the cervical portion of the tumour was excised. The tumour surrounded the right carotid sheath, the larynx and entire trachea. As the tumour was very fragile, wiping even with a gauze swab caused profuse haemorrhage. Thoracic surgeons in our clinic advised us that further dissection into the mediastinum carried a considerable risk. Total blood loss was 500 ml. The post-operative course was uneventful. The histological diagnosis was venous haemangioma (Fig. 5).

Discussion

Venous haemangioma extending from the deep neck to the anterior mediastinum involving the upper respiratory airway tract is quite rare. Most haemangiomas of the neck are either of capillary or cavernous type and are one of the most common tumours in children and young adults (Enzinger and Weiss, 1988). Laryngeal haemangiomas are of considerable clinical importance, being usually described as subglottic masses in infants and as supraglottic masses in adults, because they cause dyspnoea and haemorrhage (Mugliston and Sangwan, 1985; Shikhani *et al.*, 1986; Konior *et al.*, 1988). Most of the lesions are single sessile masses (Brodsky *et al.*, 1983).

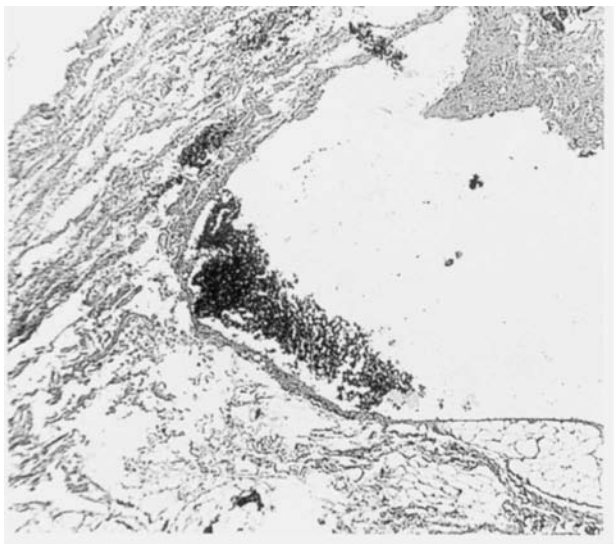

Fig. 3

In the mediastinum, haemangiomas are rare lesions and occur mostly in the anterior or posterior compartments but also the vast majority are of either cavernous or capillary type (Ellis *et al.*, 1955; Benjamin *et al.*, 1972; Cohen *et al.*, 1987). A few authors have reported a mediastinal haemangioma with extension into the neck or the supracapsular area, but there have been no descriptions of laryngo-tracheal involvement (Davis *et al.*, 1978).

Another clinical entity, diffuse upper haemangiomas, have been reported previously (Konior *et al.*, 1988). In that case the main lesion was within the respiratory tract and without vast neck and mediastinal involvement.

In our case, partial resection of the cervical portion of the tumour successfully relieved the complaint of dyspnoea. It was considered that separation of the main tumour from the affected larynx might reduce the blood flow into the larynx. The patient has been followed for one year post-operatively. She did not complain further of dyspnoea or haemoptysis, but we think that careful follow-up is necessary in this patient.

We conclude that adult cases of laryngeal haemangioma should be carefully examined for extra-laryngeal involvement.

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