Thymic haemangioma presenting with a left innominate vein aneurysm: insight into the aetiology

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INTRODUCTION

Haemangiomas of the thymus are rare, and reports with pathological findings are even rarer, with only 7 and 1 currently found in the medical literature, respectively. Innominate vein aneurysms are also rare, with only 19 cases reported to date, and its aetiology remains controversial. We treated a patient with a thymic haemangioma and left innominate vein aneurysm. Pathological findings indicated that the left innominate vein aneurysm was caused by the thymic haemangioma. This case provides further information on the aetiology of innominate vein aneurysms.

CASE REPORT

A 27-year old Japanese man consulted a regional hospital in January 2011 with a complaint of cough. An abnormal chest shadow was detected on examination, and he was referred to our hospital for further study. He did not complain of left face or upper extremity oedema suggestive of innominate vein obstruction and hypertension. A chest roentgenogram revealed a left mediastinal widening (Fig. 1A). Furthermore, computed tomography (CT) revealed an anterior mediastinal mass of 50 × 45 × 30 mm with some phleboliths and swelling of the left innominate vein (Fig. 1B). Three-dimensional (3D) CT showed dilation of the innominate vein, which was partly wrapped by the tumour (Fig. 1C and D). These findings indicated that the lesion was an innominate vein aneurysm with a mediastinal tumour.

DISCUSSION

Hosein et al. [1] showed that isolated innominate vein aneurysms are very rare, and only 15 cases were reported at that time. A few additional cases of isolated innominate vein aneurysms have been reported since then.

The aetiology of innominate vein aneurysms has been discussed in the literature, but no definite evidence has been provided. Shatz et al. [2] reported that the potential aetiology of thoracic venous aneurysms included congenital malformations, trauma, inflammation and degenerative changes in the vessel wall. In a single case, congenital absence of the longitudinal muscle coat of the adventitia was reported. Aneurysms may also occur secondary to arterio-venous fistulae. Anecdotal case reports have documented an association with a cystic hygroma [3]. Infection has also been suggested as a potential aetiology [1].

Owing to proliferation and advances in CT, it is now possible to easily and rapidly visualize the structures of the blood vessels. 3D multidetector CT enables one to readily discern the necessary anatomy. In this case, 3D CT showed that the tumour encompassed the innominate vein, and that the left innominate

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vein aneurysm appeared to be retracted by the tumour. Histologically, a transitional portion was found between the left innominate vein and cavernous haemangioma, and the tumour appeared to retract the lower portion of the left innominate vein (Fig. 2A–D). These findings provided supporting evidence for the possibility that the aneurysm was caused by the tumour. Thus, neoplasms may be included in the aetiology of thoracic venous aneurysms, especially those in the innominate vein.

Haemangiomas are rare tumours accounting for 0.5% of mediastinal masses [4]. The origin of these tumours in the mediastinum
varies, but a small number are of proven thymic origin. There have been four reports of seven thymic haemangiomas in the literature, but pathological reports and detailed clinical data were available only in one report [5].

The present case was compatible with a cavernous haemangioma, and a transitional portion between the haemangioma and the left innominate vein was observed histologically. We believe that this report is valuable because we have presented both clinical and pathological findings.

Conflict of interest: none declared.

REFERENCES