Treatment solution by Elzain et al.

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The operation was performed via a median sternotomy. The intraoperative assessment confirmed a particularly locally advanced thymic tumour which was infiltrating the left brachiocephalic vein, the anomalous LSPV which was draining into the brachiocephalic vein, pericardium and the front of the aortic arch. Standard cardiopulmonary bypass with beating heart was established; the innominate vein was resected along with the anterior part of the anomalous LSVP en bloc with the thymoma. The anomalous LSPV was reconstructed with bovine pericardium and reconnected to the left subclavian vein. The left phrenic nerve was resected en bloc. Finally, the anterior pericardium and the aortic arch adventitia were removed en bloc with the tumour (Fig. 1). No significant oedema was observed on the left arm. Formal anticoagulation aiming for an INR of 2.0–3.0 as per the presence of the vascular patch. Histology confirmed the tumour to be Thymoma B2, Masaoka classification stage III. All the surgical margins were clear of malignant cells including the aortic adventitia. The patient was referred for adjuvant radiotherapy. To the best of our knowledge, this is the first report describing this condition. Complete resection is the gold standard. This included resection of brachiocephalic vein and the partial anomalous LSPV resection, reconstruction and connection to the left subclavian vein. The fate of artificial vascular graft replacing the brachiocephalic vein in case of thymoma resection is uncertain. Yagi et al. [1, 2] reported on angiographic follow-up in 4 cases and 2 of them were found occluded. On the other hand, brachiocephalic vein ligation has been shown to be safe as the venous drainage takes place via multiple collaterals.

CONCLUSION

In the present case, the anomalous LSPV was reconnected to the left subclavian vein; this may raise some questions about the difference in the pressures of the two venous systems. The venous pressure is expected to be higher in the systemic venous circulation. However, we did not observe any sign of pulmonary vein obstruction. Thymomas involving major vascular structures remain a challenge; however, complete resection remains the gold standard.

Conflict of interest: none declared.

REFERENCES


Figure 1: (A) The tumour encasing the innominate and the anomalous LSPV. (B) Showing the innominate and the anomalous LSPV veins resected, it shows the latter being connected to the left subclavian vein. LSPV: left superior pulmonary vein.