Intrathoracic goitre in the posterior mediastinum

LUIS SERGIO FRAGOMENI AND PAULO CERATTI DE AZAMBUJA

From the Cardiothoracic Unit of the São Vicente Hospital, University of Passo Fundo, Brazil

We describe here a case of intrathoracic goitre located in the posterior mediastinum causing superior vena caval obstruction.

Case report

A 45-year-old woman was admitted to the Cardiothoracic Unit complaining of increasing dyspnoea for six months. She had a dry cough, no haemoptysis and no dysphagia but she had noticed some change in her voice in the previous three months.

She had no chest pain, but said that she had swelling of the face and lower limbs, mainly in the evenings. She had lost 7 kg in the previous two months.

Her past history included three unknown abdominal operations, and an ovarian cyst had been removed 10 years previously. The histological diagnosis was unknown. Thyroidectomy was also performed in that period.

On examination, her general condition was good, but signs of superior vena caval obstruction were obvious. The trachea was deviated to the right and a fixed nodule, 3 cm in diameter, was present in the area of the old thyroidectomy scar. The lungs were clear and the heart sounds were normal. Blood pressure was 130/80 mmHg, pulse rate 80 beats per minute and regular. The abdomen and central nervous system were normal.

The haematocrit, haemoglobin, white cell count, urea and electrolytes were within normal limits. The chest radiograph (figure) showed a large mediastinal mass, deviating the trachea to the right. Tomograms of this area revealed this mass to be solid, and situated in the posterior mediastinum. Radioiodine scanning of the neck showed a solitary nodule, and the mediastinal mass was also taking up iodine.

With a provisional diagnosis of intrathoracic goitre, and to exclude the possibility of a malignant tumour, a mediastinotomy was performed resecting the second left costal cartilage, when the mass was biopsied. Frozen section confirmed the presence of thyroid tissue with no evidence of malignancy. After this, a "collar" incision was made, and the nodule present in the cervical area was removed.

A median sternotomy was performed with the intention of removing the intrathoracic mass. A large tumour weighing 300 g was removed from the

Figure Chest radiograph on admission. A large mediastinal mass and the severe tracheal shift are demonstrated.

posterior mediastinum. It lay in front of the spine, deviating the trachea to the right, extending behind the left carotid artery and in contact with the aortic arch. There was no anatomical connection with the cervical nodule. The cervical and thoracic wounds were closed in layers. Both pleural cavities and the mediastinum were drained with an underwater seal system.

The patient made an uneventful recovery, and was discharged from hospital on the ninth post-operative day. The final histological report was of a nodular goitre.

Thirty days after discharge from hospital she was asymptomatic, with no signs of superior vena caval obstruction, and a normal chest radiograph.

Discussion

Most mediastinal tumours are benign lesions. Intrathoracic goitre represents a small percentage of these tumours.

The superior vena caval syndrome with an intrathoracic mass is associated with malignancy in about

Address for reprint requests: Dr LS Fragomeni, Cardiothoracic Unit, São Vicente Hospital, University of Passo Fundo, Brazil.

75% but benign intrathoracic goitre can cause a superior vena caval syndrome.¹

In our case, the presence of a mass in the posterior mediastinum in combination with caval obstruction, hoarseness, and weight loss suggested a poor prognosis. In this situation, we believe it is important to establish the precise diagnosis before a major resection is attempted. Here, mediastinotomy and frozen section confirmed the diagnosis and resectability.

If the tumour is located in the anterior mediastinum, the cervical approach is generally accepted and usually sufficient. When the tumour is situated posteriorly, it is difficult to choose the best ap-

proach for resection. Although some authors advise a lateral thoracotomy,^{2,3} we removed this mass by means of a median sternotomy, enucleating it through the left pleural space.

References

- 1 Ulreich S, Lowman RM, Stern H. Intrathoracic goitre. A cause of SVC syndrome. *Clin Radiol* 1977; **28**:663-5.
- 2 Sweet RH. Intrathoracic goitre located in the posterior mediastinum. *Surg Gynecol Obstet* 1949; **89**:57-66.
- 3 Heuer GJ, Andrus WDW. The surgery of mediastinal tumours. *Am J Surg* 1940; **50**:1-79.