Retrosternal goitre

Very few retrosternal goitres arise from ectopic thyroid tissue; most arise from the lower pole of a nodular goitre. If the neck is short and the pretracheal muscles are strong, as in men, the negative intrathoracic pressure tends to draw these nodules into the superior mediastinum.

Clinical features

A retrosternal goitre is often symptomless and is discovered on a routine chest radiograph. There may, however, be severe symptoms:

- Dyspnoea, particularly at night, cough and stridor (harsh sound on inspiration). Many of these patients may attend a chest clinic with a diagnosis of asthma before the true nature of the problem is discovered;
- dysphagia;
- Engorgement of neck veins and superficial veins on the chest wall. In severe cases there may be obstruction of the superior vena cava;
- Recurrent nerve paralysis is rare. The goitre may also be malignant or toxic.

Radiographs show a soft-tissue shadow in the superior mediastinum sometimes with calcification and often causing deviation and compression of the trachea. Radio-graphs of the thoracic inlet give better definition than a chest radiograph. Significant tracheal compression and obstruction may be demonstrated objectively by a flow—volume loop pulmonary function test in which the rate of flow is plotted against the volume of air inspired and then expired. Deterioration in flow due to increase in tracheal compression either acutely or in the long term may be used to monitor progression of the disease and indicate the need for surgery. The changes are reversed by operation.

Treatment

If obstructive symptoms are present in association with thyrotoxicosis it is unwise to treat a retrosternal goitre with antithyroid drugs or radioiodine as these may enlarge the goitre. Resection can almost always be carried out from the neck and a midline sternotomy is hardly ever necessary. The cervical part of the goitre should first be mobilised by ligation and division of the superior thyroid vessels, and by ligature and division of the middle thyroid veins and the inferior thyroid artery. The retrosternal goitre can then be delivered by traction and finger mobilisation. Haemorrhage is rarely a problem because the goitre takes its blood supply with it from the neck. The recurrent laryngeal nerve should be identified if possible before delivering the retrosternal goitre, as it may be abnormally displaced and is particularly vulnerable to injury from traction or tearing. If a large multinodular goitre

cannot be delivered intact from the retrosternal position it may be broken with the fingers and delivered piecemeal, but this should never he done if the lesion is solitary and there is the possibility of carcinoma.