Case Report

Large posterior mediastinal goiter post total cervical thyroidectomy: a case report

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INTRODUCTION

Posterior mediastinal goitres are relatively rare, comprising only about 10% of all intrathoracic goitres.¹ Recurrent, ectopic, retro-vascular mediastinal goitres are generally subjected to surgery because of high risk of tracheal and oesophageal compression.² We report a large right posterior mediastinal goitre identified 30 years post total cervical thyroidectomy, and which was completely excised via a posterolateral thoracotomy.

CASE REPORT

A 68 years old male presented with dyspnoea on exertion. Medical history included a total cervical thyroidectomy 30 years ago, with no signs of malignancy. Chest X-ray showed a mass occupying the right apical paratracheal space causing displacement of the trachea (Figure 1A).

ABSTRACT

Thoracotomy approach is indicated for a complete and safe posterior mediastinal goitre removal. A 68 years old male was hospitalized due to a right mediastinal mass found in a chest X-ray and confirmed by computed tomography. The patient had undergone total cervical thyroidectomy thirty years ago. A computed tomography (CT) guided percutaneous needle biopsy of the mass revealed thyroid tissue. Subsequently, the mass was completely resected through a right posterolateral thoracotomy. The histopathology confirmed a large mediastinal goitre with no signs of malignancy. The patient had an uncomplicated recovery. We present a relatively rare case of a successful resection of a posterior mediastinal goitre, occurring thirty years post-total cervical thyroidectomy. We advocate lateral thoracotomy to achieve a broad operative field and enhance surgical safety.

Keywords: Intra-thoracic goitre, Posterior mediastinum, Thoracotomy, Thyroidectomy

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A encapsulated mass was found in the right posterior apex overlying the trachea in the mid-part, with the oesophagus on the back, inferiorly the margins of the azygos vein, anteriorly the superior vena cava and superiorly the anonymous artery (brachiocephalic trunk) and right subclavian artery.

**DISCUSSION**

Posterior mediastinal goitre following total cervical thyroidectomy is a rare disease and infrequently reported. Mediastinal goitres can remain asymptomatic until there is compression of the structures located in the thoracic inlet. The most common symptom is dyspnoea because of the high risk of tracheal compression. Other symptoms may include stridor, wheezing, cough, dystonia, hoarseness, dysphagia, phrenic nerve paralysis, and Horner’s syndrome.1

Occasionally, patients suffer acute haemorrhage into the goitre, which may cause a sudden, potentially fatal, tracheal obstruction.3 Rarely, jugular vein thrombosis, cardiovascular steal syndrome, and even superior vena cava syndrome can occur.3 Imaging modalities include chest X-ray showing superior mediastinal widening, often unilateral, with or without tracheal deviation or narrowing.

Computed tomography of the neck and thorax is the gold standard technique for evaluation of the mediastinal masses. Needle biopsy is recommended only if there is local expertise available for establishing pre-op diagnosis. Selective angiography is also a useful tool confirming the origin and extent of aberrant vasculature of the mass.

Differential diagnosis of posterior mediastinal goitre can vary greatly and should be differentiated from neurogenic tumour, vertebral lesion, bronchogenic cyst, etc.

Surgical excision should be performed as early as possible once diagnosed, especially in symptomatic cases or when malignancy is suspected.5

**CONCLUSION**

In this relatively rare case a successful complete resection of a right posterior mediastinal goitre, following 30 years post-total cervical thyroidectomy was conducted. Adequate exposure and complete surgical excision are mandatory for asymptomatic goitres of the posterior mediastinum.

Overall, the recurrence of a thyroid ectopic mass following thirty years post-total cervical thyroidectomy is extremely rare and to our knowledge only two similar cases have been reported in the available literature.

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