

CLINICAL IMAGES

Vocal cord paralysis secondary to multinodular goitre

W Mulwafu, E Panieri, M Garb, M Duffield

A 71-year-old man was referred to the ear, nose and throat (ENT) department from the neurology department for evaluation of dizzy spells experienced over 6 years. He had multiple medical problems that included ischaemic heart disease, myelodysplasia, hypertension and diabetes mellitus. He also reported a recent onset of hoarseness of voice.

ENT examination showed no vestibular source of dizziness but revealed a massively enlarged thyroid gland, with an asymmetrical and dominant enlargement of the left lobe extending from the angle of the mandible to behind the clavicle. Nasopharyngoscopy revealed left vocal cord paralysis.

Computed tomography (CT) scan of the neck (Fig. 1, A - D) showed an enlarged unhomogeneous thyroid gland, particularly the left lobe, with multiple areas of decreased density and foci calcification consistent with a multinodular goitre. The left lobe extended superiorly to the level of the epiglottis, posterior to the pharynx and inferiorly in a retrosternal position to the aortic arch.

Fine-needle aspiration cytology showed features suggestive of papillary carcinoma.

The patient underwent a left thyroid lobectomy; the enlarged lobe was delivered from the retrosternal position via a routine cervical approach, facilitated by division of the strap muscles. The recurrent laryngeal nerve

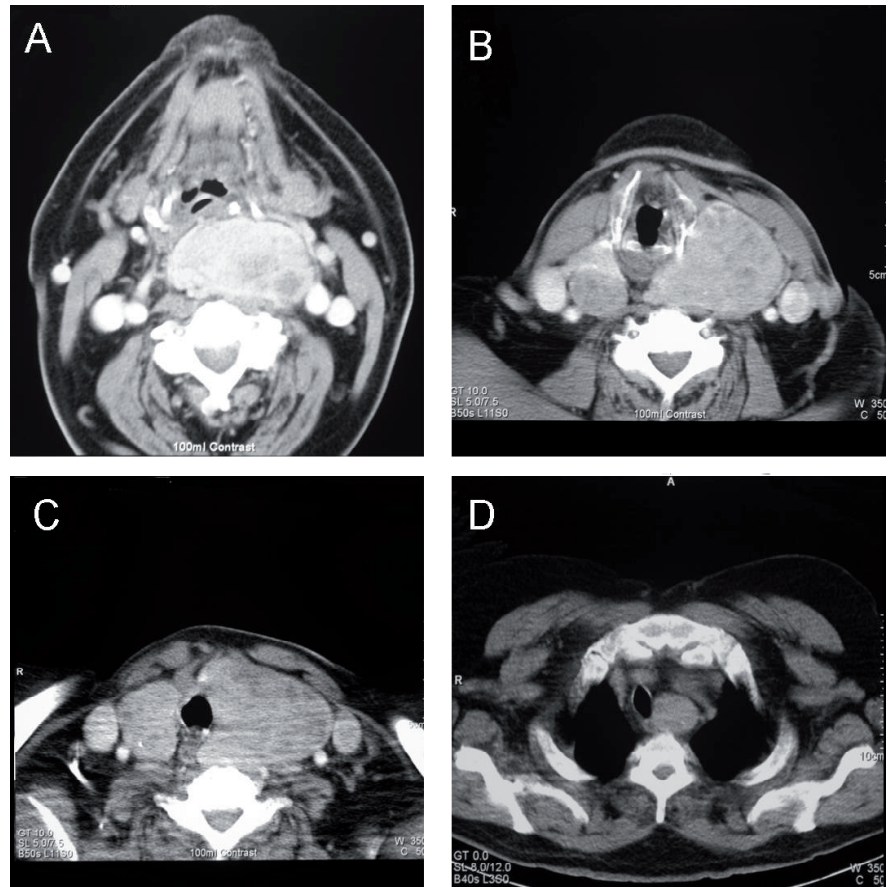


Fig. 1. Axial CT scan of the neck with contrast.

was visualised along its cervical course and was noted to be free of any direct involvement or invasion. The specimen was submitted to frozen section, which did not confirm the preoperative suspicion of papillary carcinoma. Final histological examination confirmed the intraoperative diagnosis of a multinodular goitre (Fig. 2).

The postoperative course was uneventful, and the patient was discharged on the second postoperative day. At 6 weeks' follow-up he reported an improvement in the quality of his voice, and repeat indirect laryngoscopy showed normal vocal cord movement.

Comment

Vocal cord paralysis is most commonly caused by head and neck malignancy and by injury to the recurrent laryngeal nerve during thyroidectomy.¹ Paralysis of the recurrent laryngeal nerve occurring in the presence of goitre is considered malignant until proved

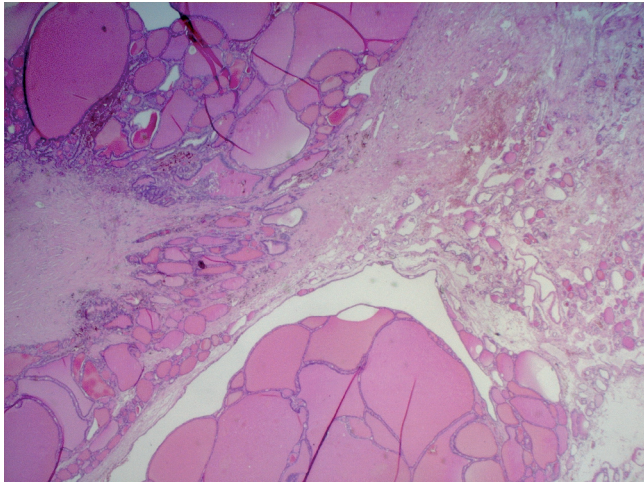


Fig. 2. Photomicrograph of the histology specimen.

otherwise.² Vocal cord paralysis secondary to benign thyroid disease is rare and is said to have a preoperative incidence of 0.7%.³

Vocal cord paralysis in association with thyroid disease does not necessarily indicate malignancy.

1. Tennyson H, Fowler C, Brennan J. A rare etiology of bilateral vocal cord paresis: Multinodular goiter. *Otolaryngol Head Neck Surg* 2006; **134**: 340-342.
2. Fenton JE, Timon CI, McShane DP. Recurrent laryngeal nerve palsy secondary to benign thyroid disease. *J Laryngol Otol* 1994; **108**: 878-880.
3. Abboud B, Tabchy B, Jambart S, Hamad WA, Farah P. Benign disease of the thyroid gland and vocal cord paralysis. *J Laryngol Otol* 1999; **113**: 473-474.