A Very Rare Cause of Subglottic Stenosis: Non-Malignant Intratracheal Thyroid Tissue

Subglottik Stenozun Çok Nadir Bir Nedeni: İntratrakeal Malign Olmayan Tiroid Dokusu

Özet

Anahtar Kelimeler
Subglottik Stenoz; Intratrakeal Tiroid; Guatr Ameliyatı Komplikasyonu

Abstract
We present a case of subglottic stenosis associated with benign thyroid tissue involvement due to relapse of multinodular goiter despite surgery 14 years ago. The patient had undergone bilateral subtotal thyroidectomy 14 years ago and the pathology report had been multinodular thyroid tissue at the time. The patient recently presented to an emergency service due to sudden development of respiratory distress and was then directed to our center. Cervical tomography showed bilateral thyroid tissue that narrowed the tracheal diameter by 80% by invading the trachea from the left wall at the level of the thyroid gland. The patient required urgent tracheostomy due to serious respiratory trouble. The trachea was incised vertically about 2.5 cm below the cricoid cartilage. A 2 cm endotracheal lesion with margins that could not be distinguished from the left vocal cord was observed and biopsies were taken from both this lesion and the tissue surrounding the trachea. A Montgomery T-tube extending from the subglottic area to the distal section was placed. Pathology evaluation revealed histopathological findings that matched normal thyroid tissue. Although infrequent, tracheal invasion associated with a thyroid cancer is known to occur. We present a case with postoperative intratracheal relapse due to a benign cause and the emergency treatment.

Keywords
Subglottic Stenosis; Intratracheal Thyroid Tissue; Complication of a Goiter Operation

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Introduction
The causes of benign tracheal stenosis include intubation, tracheostomy, chemical or thermal damage and trauma, and less frequently inflammatory or connective tissue diseases, sarcoidosis and idiopathic subglottic stenosis [1]. Tracheal injury during a thyroid surgery is very rare [2, 3]. Minor iatrogenic rupture can go unnoticed and reappear in very late periods as a relapse of the disease or subglottic stenosis. We present a patient who had undergone bilateral subtotal thyroidectomy due to multinodular goiter and developed a subglottic stenosis associated with intratracheal thyroid tissue 14 years after the surgery for the first time in the literature.

Case Report
A 37-year-old female patient underwent bilateral subtotal thyroidectomy 14 years ago and the pathology report was multinodular thyroid tissue. The patient had been using asthma treatment for the last three years. The respiratory problems particularly the shortness of breath and stridor had increased recently. She presented to the emergency service of an external health care facility because of acute respiratory distress. The indirect laryngoscopy by the otolaryngologist revealed a tracheal mass under the vocal cords and she was referred to our center. Her stridor could be heard without auscultation during her physical examination. A soft tissue formation sized 15x12 mm was seen on her cervical computed tomography. The mass was localized on the left subglottic area and extended towards the lumen, causing about 80% stenosis in the lumen of the larynx and trachea. There was heterogeneous contrast enhancement involvement after an intravenous contrast medium injection and the margins could not be distinguished clearly from the left thyroid lobe (Figure 1). The margins also could not be distinguished from the left vocal cord on the superior aspect (Figure 2). Both thyroid lobes seemed to be increased in size and had a heterogeneous appearance. Additionally, heterogeneous iso-hypoechoic solid nodular lesions were seen in both thyroid lobes; the largest was 19 mm in size and located on the posterior aspect of the middle part of the left thyroid lobe on cervical computed tomography (Figure 3).

Urgent tracheostomy was required due to serious respiratory distress. The trachea was incised vertically about 2.5 cm under cricoid cartilage. There was a 2 cm endotracheal lesion whose borders with the left vocal cord could not be distinguished. The left side of this area was invaded by a thyroid tissue. Many biopsies were taken from both this lesion and the tissue surrounding the trachea. Intratracheal tissue was removed as much as possible by electrocautery and sharp dissection. A Montgomery T-tube was placed extending from the subglottic area to the distal section (Figure 4). The respiratory difficulty was relieved after the surgery. The pathology result was reported as thy...
We have presented a case with benign intratracheal thyroid tissue that caused subglottic stenosis as a very late complication of thyroidectomy 14 years ago for the first time in the literature. Benign tumors of the trachea can be treated by endoscopy but surgery may sometimes be needed. Tracheostomy is needed very rarely. Using a T-tube may be an option if it is not possible to remove the lesion.

**Competing interests**
The authors declare that they have no competing interests.

**References**

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