



# Delayed Tracheal Perforation Following Thyroidectomy: A Rare Complication

## Tiroidektomi Sonrası Gecikmiş Trakeal Perforasyon: Nadir Bir Komplikasyon

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### Dear Editor,

Thyroidectomy is the most common curative treatment for benign and malignant thyroid diseases.

<sup>[1]</sup> Complications include hypocalcemia, vocal cord paralysis, hypoparathyroidism, haematoma, wound infection and tracheal injury.<sup>[2]</sup> Repeated surgeries, tumor invasion, inexperience of surgical technique and experience, postoperative infections may cause adhesions and increase the risk of complications. Among these complications, late tracheal perforation without intraoperative tracheal injury is a rare occurrence.

A 50-year-old woman presented with neck swelling, a history of chronic cough and a smoking history of 180 packs/year. After evaluation, a total thyroidectomy was performed with a diagnosis of multiple nodular goiter. There were no intraoperative complications during the thyroidectomy. The routine Valsalva manoeuvre after thyroidectomy showed no air leak in the trachea. Postoperative follow-up was uneventful and the patient was discharged two days later. Histopathological evaluation was reported as Hurthle cell neoplasia.

On the 10<sup>th</sup> postoperative day, the patient was readmitted with emphysema in the neck and dyspnea after an intense coughing attack. Subcutaneous emphysema and emphysema in the lung were tried to be treated with percutaneous drainage. Surgical intervention was decided because the amount of secretion drained increased. On exploration, a tracheal perforation, approximately 0.3 cm in diameter, was found at the localization of the right thyroid lobe, which was thought to be due to electrocautery burn.

The edges of the trachea were debrided and a right strap muscle flap was prepared and fixed over the tracheal fistula with absorbable sutures. The patient was discharged 6 days after the second surgery and the 3-month follow-up was uneventful.

Risk factors for tracheal perforation after thyroidectomy include female sex, thyrotoxic goiter, prolonged intubation with high cuff pressure, inappropriate use of diathermy, and persistent, uncontrolled cough.<sup>[3]</sup> In our case, ischemic tracheal perforation was thought to have developed due to increased tracheal pressure after persistent cough unresponsive to medical treatment. Energy devices are widely used in thyroidectomy. We believe that attention should be paid to secondary injuries caused by these devices. In our case, we believe that the monopolar cautery device injured the area where the thyroid tissue was separated from the trachea in the final stage of the operation. Peri-operative recognition of tracheal perforation is important. Treatment options include primary suture with or without muscle flap, conservative management, tracheostomy, T-tube or stent placement in the trachea, and anastomosis after tracheal debridement.<sup>[4]</sup> Delayed tracheal necrosis and perforation after thyroidectomy are postoperative complications to be aware of. Early recognition and treatment of this complication are important.

**Keywords:** Energy devices, thyroidectomy, tracheal perforation



## ETHICAL DECLARATIONS

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