

# A Rare Complication Occurring Years After Thyroid Surgery: A Cutaneous Fistula

## *Tiroit Cerrahisinden Yıllar Sonra Ortaya Çıkan Nadir Bir Komplikasyon: Deri Fistülü*

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### Keywords

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### Anahtar Kelimeler

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### Abstract

The mortality and morbidity of thyroid surgery are low. The complications after thyroid surgery include bleeding, wound site infection, keloid formation, recurrent laryngeal nerve and superior laryngeal nerve injury, temporary and permanent hypocalcemia, and injury to surrounding structures such as esophagus, artery, vein and the cervical sympathetic trunk.

Other much rare complication includes cutaneous fistula formation. In this report, we describe a patient who underwent thyroid surgery and developed cutaneous fistula in the late postoperative period, a complication that has never been reported previously following thyroid surgery.

### Öz

Tiroid cerrahisi düşük mortalite ve morbiditeye sahiptir. Tiroid cerrahisi sonrası görülen komplikasyonlar; kanama, yara yeri enfeksiyonu, keloid oluşumu, rekürren laringeal sinir ve süperior laringeal sinir hasarı, geçici ve kalıcı hipokalsemi, özofagus, arter, ven ve servikal sempatik zincir gibi çevre yapılarında zedelenmedir. Deri fistülü gelişmesi çok nadir bir komplikasyondur. Bu makalede, tiroid cerrahisi uygulanmış ve geç postoperatif dönemde tiroid cerrahisi sonrası daha önce bildirilmemiş bir komplikasyon olarak deri fistülü gelişmiş bir olgu tanımlanmıştır.

### Introduction

Thyroid surgery is a safe procedure with low mortality and morbidity (1). The most common complications after thyroid surgery are post-operative hypocalcemia and recurrent laryngeal nerve injury (2). Cutaneous fistula developing from thyroidectomy incision scar is not among the known complications (3). We observed that a 57-year-old female patient developed cutaneous fistula from the incision scar 21 years after the thyroid surgery she had undergone. This case is being reported because it is an unexpected late complication following thyroid surgery.

## Case Report

The 57-year-old female patient had undergone thyroid surgery 21 years ago. The patient presented with yellow-colored discharge that was spontaneous and occurred without trauma, from an area about 1.5 cm in diameter on the thyroidectomy incision scar. A tract covering an area of about 1.5 cm was seen to have developed on the patient's thyroidectomy scar (Figure 1). There was no discharge. Ultrasonography was performed and demonstrated a hypoechoic nodule, 5 mm in diameter, in the right in a heterogeneous internal structure, sized 7x9x18 mm, in the left and 16x16x38 mm in the right, as well as a residual thyroid tissue with heterogeneous internal structure containing coarse calcifications in an approximately 8 mm area in the right. There was an approximately 1.5 cm fistulized tract in the skin in the midline. It was considered that the tract ended in a blind end, and echogenicities with air values were determined in it. Neck magnetic resonance imaging was taken and demonstrated an area that was 1 cm in diameter which showed peripheral contrast substance uptake in post-contrast analyses, which was hypointense in the T1A sequence and hyperintense in the T2A sequence with no apparent association with trachea, thyroid gland and other anatomical bodies located in the subcutaneous fatty tissue at the level of the isthmus location in the thyroid. This area was extending to the skin. Thyrotrophin-stimulating hormone, sT4, sedimentation, C-reactive protein and white blood cells in whole blood count were normal. Patient's follow up demonstrated no persistent discharge, but two black suture materials came out of a 1.5 cm area on day 7 (Figure 2). The tract closed spontaneously without requiring any surgical intervention and the patient is currently under follow up with no problems.

Written consent regarding publication of the findings and photos was received from the patient.

## Discussion

Bleeding, wound site infection and keloid formation are general complications following surgery. Specific complications after thyroid surgery are injury of recurrent laryngeal nerve and the outer branch of the superior laryngeal nerve, transient and permanent hypocalcemia, and injury to the surrounding tissue (3). In a large series including 14.934 cases evaluating



**Figure 1.** Cutaneous fistula on the thyroidectomy incision scar



**Figure 2.** Two black suture materials coming out of the cutaneous fistula

complications following thyroid surgery, transient hypoparathyroidism was reported in 8.3%, permanent hypoparathyroidism in 1.7%, recurrent permanent injury of the laryngeal nerve in 1%, transient injury in 2%, superior laryngeal nerve injury in 3.7%, diplegia, dysphagia, bleeding, and wound site infection very rare (4). Cutaneous fistula was not observed in this series. Likewise, a study by Bergenfelz et al. (5) which evaluated 3.660 cases did not report cutaneous fistula following thyroid surgery. A literature search revealed that different complications than anticipated occurred following thyroid surgery. Hypopharyngeal fistula (6), Horner's syndrome, chylous leakage fistula (7,8), flap edema (7) and seroma (8) are rare complications following thyroidectomy. With literature search,

there was no report of suture material spontaneously causing fistula in the skin years after thyroid surgery. Non-absorbable multifilament sutures are black, and was used in cutaneous, subcutaneous and fascia repairs in the past. It is, however, not preferred much currently. It may result in fistula tract, hypertrophic scar and infection if left for a long time in the skin (9). In our patient, we thought that the black suture material coming out of the cutaneous fistula was a non-absorbable multifilament suture. We believe that this suture material was used in the thyroid surgery performed 21 years ago and was left under the skin.

Development of a fistula and suture material coming out of the fistula years after thyroid surgery was considered to be a very rare late complication. With this case, we report for the first time in the literature that cutaneous fistula can be seen as a late complication of thyroid surgery. In addition, we would like to emphasize that suture material left under the skin could be one of the causes when fistula develops from a thyroidectomy scar years after the procedure and that the fistula can close spontaneously without surgical intervention.

#### Ethics

**Informed Consent:** Was obtained from patient who participated in this case.

**Peer-review:** Externally and internally peer-reviewed.

#### Authorship Contributions

Surgical and Medical Practices: M.Ü., Ç.K.E., A.O.Ç., A.M., Concept: M.Ü., Design: M.Ü., Data Collection or Processing: M.Ü., Analysis or Interpretation: M.Ü., Ç.K.E., Literature Search: M.Ü., Ç.K.E., Writing: M.Ü., Ç.K.E.

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