CASE REPORT

Neck swelling after thyroidectomy: not always a haematoma

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SUMMARY

We present a case of a patient who returned with a neck swelling 6 days following thyroidectomy and central neck compartment lymphadenectomy for suspected thyroid carcinoma. The initial clinical suspicion pointed to a haematoma, but a needle aspiration showed chyle. Chyle leak is a rare complication of thyroid surgery. In the described case, this was successfully managed conservatively with repeated aspirations and a low-fat diet. We discuss the aetiology, presentation and management of this complication.

BACKGROUND

One complication of thyroid surgery is bleeding, which usually manifests as neck swelling. Early surgical intervention is usually necessary. In this report, we present a case of post-thyroidectomy neck swelling due to an unusual cause only requiring non-surgical management.

CASE PRESENTATION

A 74-year-old woman presented with a 2.6 cm solid nodule in the left thyroid lobe. This was indeterminate on ultrasound and an ultrasound-guided fine-needle aspirate showed features suggestive of papillary carcinoma of the thyroid. The patient underwent a total thyroidectomy and central compartment lymphadenectomy. She made an uneventful postoperative recovery and was discharged 2 days later.

On the sixth postoperative day, the patient attended the accident and emergency department with a neck swelling that had been gradually increasing in size. Physical examination revealed a tense fluctuant swelling in the neck in the thyroid bed area. There was also some localised erythema around the wound site. A diagnosis of post-operative haematoma was made by the admitting surgeon and surgical intervention was contemplated. However, an attempted needle aspiration of the swelling produced 80 mL of milky fluid with resolution of the swelling. The patient was admitted overnight and observed. A further aspiration was carried out the day after admission (figure 1), as the swelling had reappeared (figure 2). A diagnosis of chyle leak was made; the patient was scheduled for outpatient follow-up and discharged with advice to have a low-fat diet.

DIFFERENTIAL DIAGNOSIS

The commonest cause of a post-thyroidectomy neck swelling is a haematoma, especially when the swelling appears within 48 h of surgery. While a

Figure 1 Chyle aspirated from the neck swelling.

small haematoma may be managed conservatively, large haematomas and those causing airway compromise would require immediate surgical drainage. When the swelling appears relatively late (6 days in this case) and appears very fluctuant, and especially if the patient has had lymph node surgery at the same time as thyroidectomy, a seroma or a chyloma should be considered in the differential diagnosis. A needle aspiration usually provides confirmation of diagnosis.

TREATMENT

During the following 6 weeks, the patient required three further aspirations as an outpatient.

Figure 2 Neck swelling.

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OUTCOME AND FOLLOW-UP

The patient was discharged after an outpatient review at 10 months following the surgery, when her neck was found to be normal. The histology of the resected thyroid and central compartment lymph nodes showed benign thyroid disease only (colloid and hyperplastic nodules in a background of lymphocytic thyroiditis) and normal lymph nodes with no evidence of malignancy.

DISCUSSION

Papillary carcinoma of the thyroid is usually treated surgically with total thyroidectomy and central neck compartment (level 6) lymphadenectomy, which includes removal of the pretracheal and paratracheal nodes and the perithyroidal nodes, including the lymph nodes along the recurrent laryngeal nerves. Chyle leak, which is leakage of lipid-rich lymphatic fluid from the lymphatic vessels, is an uncommon but recognised complication following such surgery, with a reported incidence of 0.5–0.8%.¹ This is the consequence of damage to the thoracic duct or one of its branches during the removal of the lymph nodes, especially on the left side. The highly variable anatomical course of thoracic duct in the neck where it terminates into the venous system contributes to the risk,² and the injury is often not recognised during surgery. In those with drains placed at the time of surgery, it manifests as a large volume of milky drain fluid, rich in triglyceride content, usually with the start of an oral diet.¹ In those with no drains, such as in this patient, it manifests as a fluctuant neck swelling.

Chyle leaks impair wound healing and prolong patients' hospital stay. An untreated large volume continuous chyle leak (chyle fistula) can potentially lead to severe disturbances in fluid and electrolyte balance, protein loss, abnormal metabolic status and even death.³

Current treatment of chyle leaks includes dietary fat modification, where dietary fat content is reduced and medium chain triglycerides,⁴ which are absorbed directly into the blood stream rather than via the thoracic duct, are encouraged. The aim is to decrease chyle production, allowing for spontaneous closure of the leak. More serious cases may require bowel rest with parenteral nutrition. Octreotide, a somatostatin analogue, may be helpful; it is thought to act by decreasing the absorption of

triglycerides, leading to a decrease in chyle flow.⁵ Surgical intervention is only required when conservative management fails, especially in cases of high chyle output. Embolisation of the thoracic duct has also been described.² For relatively mild and self-limiting cases of chyle leak, as in this patient, repeated aspirations are adequate, and the neck returns to normal after a few weeks.⁶

Learning points

- ▶ In patients presenting with a fluctuant neck swelling following thyroid surgery, needle aspiration might allow the diagnosis of chyloma and avoid an unnecessary return to the operating theatre.
- ▶ Chyle leak is an uncommon but recognised complication following thyroid surgery.
- ▶ Most chyle leaks can be managed conservatively.

Competing interests None declared.

Patient consent Obtained.

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