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Thyroglossal duct cyst masquerading as a haematoma

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Abstract
Thyroglossal duct cysts most frequently present in childhood as painless midline swellings around the level of the hyoid. Classically the cyst moves upwards on protruding the tongue. Here we report a novel case of a thyroglossal cyst in an adult in whom the history, examination and fine needle aspiration cytology were typical of a traumatic haematoma. This case is also unique because the thyroglossal duct cyst extended beyond the thyroid gland to the suprasternal notch and actually required two parallel transverse cervical incisions for its complete *en bloc* removal.

Key words: Thyroglossal Cyst; Haematoma

Introduction

Thyroglossal duct cysts or remnants present in childhood before the age of six in 76 per cent of cases.[1] They account for 70 per cent of congenital neck abnormalities.[2] Thyroglossal duct cysts commonly present as painless midline neck swellings.[1,2] They may also be found lateral to the midline, mainly on the left, in 10–20 per cent of cases,[3] probably because of the levator glandulae thyroideae muscle on that side.[4] Classically the swelling moves upwards on protruding the tongue.

It is quite uncommon for thyroglossal duct cysts to present in adult life.[5] It is also unusual for a thyroglossal cyst to present as a swelling below the level of the thyrohyoid membrane in an adult.[6] Here we report a young woman with a neck mass, anterior to the cricoid cartilage, that appeared after an injury during a rugby match. The swelling was initially diagnosed as a haematoma but later found to be a thyroglossal duct cyst. This atypical presentation of a thyroglossal duct cyst has not been reported previously.

Case re

port

A 25-year-old woman presented with a midline neck swelling following a tackle during a rugby match. She did not have a previous history of a neck mass. Examination of the neck revealed a 3 × 4 cm midline firm mass anterior to the cricoid cartilage. The lesion did not move with tongue protrusion. Fine needle aspiration cytology revealed red blood cells only. The clinical presentation and findings were typical of a haematoma. However, the swelling did not resolve with time but became infected, requiring aspiration of pus and intravenous antibiotics. Ultrasound examination showed the neck lump to be a cystic mass with the lower margin just above the sternal notch and the upper margin at the level of the cricoid. The patient subsequently underwent surgical exploration of the anterior neck. At surgery a cystic mass was found to be connected to a tract that extended to the tongue base. The

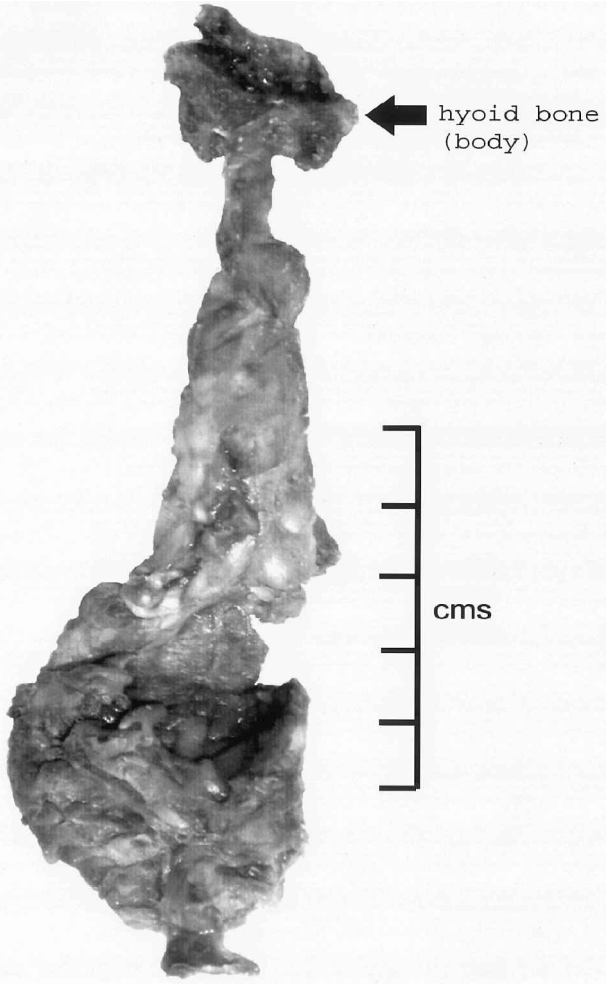

Fig. 1
Photo showing the excised specimen of the thyroglossal duct cyst, including the body of the hyoid bone.

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tract was adherent to the body of the hyoid; a finding consistent with the diagnosis of a thyroglossal duct cyst. Two parallel transverse neck incisions were necessary to remove the entire tract *en bloc* with the body of the hyoid (Figure 1). The first incision was made in the skin just below the level of the cricoid cartilage and the second incision was at the level of the hyoid bone. Histological examination of the specimen confirmed a thyroglossal duct cyst.

Discussion

The thyroid gland develops during the fourth week of intrauterine life as a median thickening in the ectoderm of the floor of the pharynx between the first and second pharyngeal pouches.[7] The epithelial proliferation invaginates to form a thyroid diverticulum which descends in the anterior neck to reach the adult site by the seventh week. The thyroid gland remains connected to the foramen caecum by a thyroglossal duct which eventually involutes and disappears. A thyroglossal cyst results from persistence of the thyroglossal duct, or part of the duct, and may appear at any point in the migratory pathway taken by the thyroid gland during its development,[8] including the thyroid gland *per se*.[9]

We report a case of a thyroglossal cyst masquerading as a haematoma and could not find any other previous report in the literature. This case is also unique because the tract extended beyond the thyroid gland to the suprasternal notch and actually required two separate transverse cervical incisions for its complete removal. It is our conjecture that the injury may have led to bleeding in a dormant thyroglossal tract which subsequently became larger inferiorly by an expanding haematoma, infection and inflammation. These factors may also explain why the lesion did not move upwards with tongue protrusion. We did not immediately consider a thyroglossal cyst at presentation partly because of the temporal association of the swelling with the rugby injury and partly because the mass did not move on protruding the tongue or on swallowing. This case emphasizes the general principle that trauma often leads to presentation of pre-existing non-traumatic lesions.

- **An adult patient with a midline mass appeared to have a traumatic haematoma. Subsequent investigation showed this lesion to be a thyroglossal duct cyst**
- **This atypical presentation has not been reported previously**

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