

Ectopic salivary gland in the posterior triangle of the neck

J. N. MARSHALL*, G. SOO*, F. V. COAKLEY†

Abstract

Ectopic cervical salivary tissue may present as a discharging sinus if a duct system and cutaneous orifice are present. Where described in previous reports these openings have been located along the anterior border of sternomastoid or in the anterior triangle, making this a differential diagnosis of a branchial sinus. We report on a patient who presented with an ectopic salivary gland in the posterior triangle of the neck.

Key words: Neck; Salivary gland, ectopic

Case report

A 33-year-old male presented with a discharging sinus on the right side of the neck. The discharge was clear, watery and related to eating, being maximal prior to and during a meal. The sinus had been present since childhood. On examination a punctum was visible over the lateral border of sternomastoid and 3 cm above the clavicle. This discharged clear fluid on massaging the surrounding tissue. The patient had no other known or apparent congenital abnormality.

A sinogram was performed by cannulating the small cutaneous opening with a 27 G submandibular sialography catheter and injecting contrast. This revealed a 4 cm tubular structure extending inferiorly and then laterally. Small side branches were evident and suggestive of a glandular structure (Figure 1). A CT sinogram confirmed the lateral relationship of the opening to the sternomastoid and showed the structure lay just below the platysma but did not involve deeper structures.

Excision of the sinus was performed under general anaesthesia. The sinus tracked inferiorly through the platysma, then extended laterally beneath the superficial layer of deep cervical fascia. Throughout its length the sinus was surrounded by glandular tissue. The patient had an uncomplicated post-operative course and was asymptomatic when seen three months later.

Histology of the specimen (Figure 2) showed a glandular structure comprising mixed salivary tissue with a complete duct system.

Discussion

The presence of salivary gland tissue in abnormal sites is referred to as ectopia or heterotopia. This may present in one of three ways: (i) when the amount of salivary tissue is large enough to cause symptoms or a mass (Botrill *et al.*, 1992; Banerjee *et al.*, 1993); (ii) if a tumour develops within such tissue (Singer *et al.*, 1979; Pesavento and Ferlito, 1976) or (iii) when there is an associated duct and orifice.

Accessory salivary glands with a duct system commonly occur anterior to the parotid gland, the ducts draining into the main parotid duct. These are considered a variant of normal anatomy (Batsakis, 1986). Ectopic salivary tissue

with a duct system is otherwise a rare entity, but is in the differential diagnosis of a lateral cervical fistulae. We have found only 25 cases of ectopic salivary gland tissue with a discharging sinus in the world literature. Eighteen have been unilateral, and of these 11 were right-sided, five left-sided and two cases unspecified. Where described, the duct opening is at the anterior border of sternomastoid in five cases, in the 'anterior neck' in seven cases and 'suprasternal' in two cases (Jernstrom and Prietto, 1962; Youngs and Scofield, 1967; Stingle and Priebe, 1974; Mair *et al.*, 1979; Rothner, 1979; Singer *et al.*, 1979). Mair *et al.* (1979) reviewed the histology of a series of lateral cervical fistulae and found salivary tissue present in eight out of 22 cases. In five of these cases the salivary tissue was

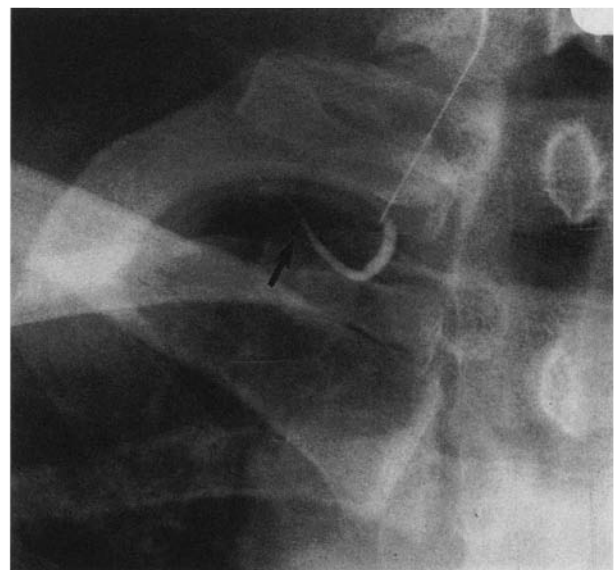


FIG. 1

AP view of the sinogram performed on the lateral cervical opening. Contrast has been introduced through a submandibular sialography catheter. Small side branches are evident (arrowed).

From the Departments of Otolaryngology* and Radiology†, Leicester Royal Infirmary.
Accepted for publication: 25 February 1995.

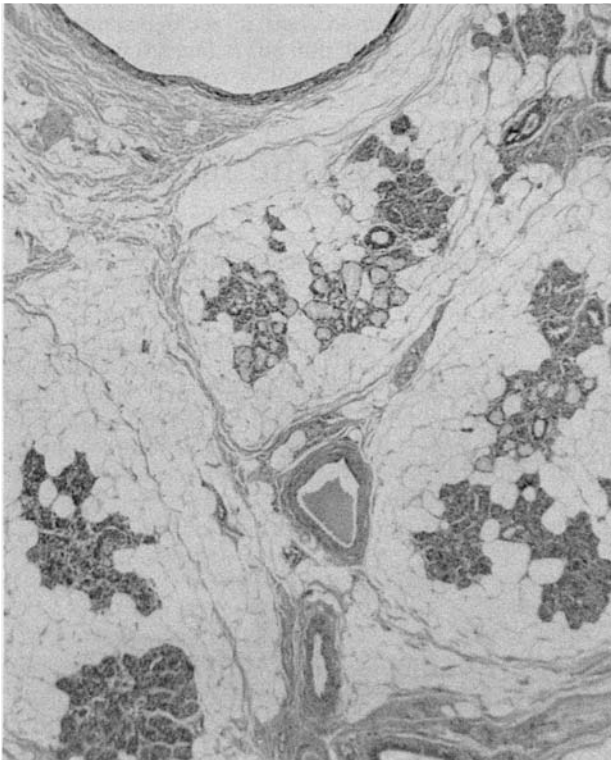


FIG. 2

Numerous salivary acini are present within the fat and connective tissue. Part of the duct is clearly visible.

predominant and was felt to represent a congenital cervical salivary fistula. In contrast, Maran and Buchanan (1978) in their pathology review of 21 'branchial' sinuses revealed no evidence of any salivary tissue.

The origin of ectopic salivary gland elements in the neck is unknown. It has been speculated that they are developmentally related to the branchial arches, especially the second. This may occur either by aberrant downgrowth of tissue or by heteroplasia within the precervical sinus of His (Youngs and Scofield, 1967). If so, it is difficult to explain why in this case the opening occurred at the lateral border of sternomastoid with the duct and glandular structure lying laterally in the posterior triangle. It is possible to conjecture that an original duct opening into the anterior triangle existed at an earlier developmental stage but was replaced by a more direct route to the skin in a more lateral position.

It is worth emphasizing that the sinogram and CT scan

obtained in this case were helpful in determining the anatomy and facilitated subsequent surgical excision. A CT sinogram should be considered if the relationship of the sinus is unclear and there is concern about its proximity to the major vascular structures.

Conclusion

Ectopic salivary gland tissue with a duct system in the neck is rare. It may present as a discharging sinus in the lower neck but this is not limited to the anterior triangle or suprasternal region as has been previously described. Sinography is helpful in defining the relevant anatomy pre-operatively.

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Mr J. N. Marshall, B.Sc., F.R.C.S.,
Department of Otolaryngology,
Queens Medical Centre,
Nottingham NG7 2UH.