Ectopic salivary gland tissue in palatine tonsil: A case report and review of literature

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ABSTRACT
A case of ectopic salivary gland tissue in a routine tonsillectomy specimen is reported and the literature is reviewed. Tonsillectomy specimens are routinely sent for histopathologic evaluation to assess the nature of inflammatory process as well as to exclude occult malignancy. A tonsillectomy specimen from a young woman who underwent surgery for recurrent attacks of tonsillitis in the previous six months was received at the histopathology laboratory of Gulf Medical College Hospital, Ajman. Routine microscopic examination revealed tonsilar tissue with chronic inflammation and lobules of mucous secreting salivary acini with ducts adjacent to the surface squamous epithelium of the tonsilar tissue.

Key words: heterotopia, salivary gland, tonsil, tonsillectomy, histopathology

INTRODUCTION
Ectopic (heterotopic) salivary tissue in the tonsil is rare. A review of the literature published over the last 30 years revealed only four reports of the presence of normal salivary gland tissue or tumors arising from it, in the tonsil. Disease processes including neoplasms can arise in the ectopic salivary gland. We report a patient with bilateral ectopic salivary gland tissue in the palatine tonsil, and review the literature.

CASE REPORT
A 23-year-old woman presented with repeated attacks of sore throat, for which she had been treated previously elsewhere. She also complained of dysphagia. General examination revealed an otherwise healthy young female of thin build. On ENT examination, the tonsils appeared to be small and mildly congested. Multiple, small, nontender jugulodigastric lymph nodes were palpable. Intraoral palpation was normal.

As she complained of dysphagia a barium swallow was done which was reported to be normal. The patient was advised to undergo tonsillectomy. Routine preoperative investigations were within normal limits and she underwent bilateral tonsillectomy. Preoperatively, the tonsils were found to be small and fibrotic. After completion of the tonsillectomy, a small nodular mass was observed in the superior aspect of the tonsillar fossa, a few nodules of which were within the fibers of the palatopharyngeus muscle. These were dissected out and removed. There was a similar picture in both tonsillar fossae. The main mass of tonsil did not appear any different, but the superior pole masses were seen bilaterally and were similar, with nodules embedded in the muscle which had to be dissected out.

On gross histopathological examination, both tonsils appeared to be of similar size, 2.5x1.5x1.0 cm. each and greyish white in color. External surface was vaguely nodular. A similar but smaller piece of tissue was also present in the specimen bottle measuring 1.0x1.0x0.5 cm. Representative sections
were taken for microscopic examination, which revealed features of acute on chronic tonsillitis. Additionally, foci of mucous secreting acini with ducts (ectopic salivary tissue) were identified among the lymphoid follicles and beneath the covering squamous epithelium of tonsil (Figures 1 and 2). Similar foci of ectopic salivary tissue were also present within muscle fibers (Figure 3).

DISCUSSION

The palatine tonsils are a pair of mucosa-associated lymphoid tissue. They are located in the tonsillar fossa on the lateral wall of the oropharynx and are bounded on three sides by skeletal muscles of the pharynx. Embryologically, the palatine tonsils and tonsillar fossae derive from the endodermal lining of the second pharyngeal pouch. The palatine tonsils appear at the 9th week of fetal development. The major salivary glands appear earlier, between the sixth and eighth week, beginning as epithelial buds from the primitive oral cavity. Minor intraoral salivary glands develop much later in varied anatomic locations, during the third month of intrauterine life. These are considered as the source of ectopic salivary tissue as well as tumors of salivary gland origin in the tonsils. Nonetheless, heterotopia of salivary gland tissue is of rare occurrence. To the unaided eye, ectopic salivary tissue does not appear very different from that of the tonsil except for the slightly lobulated external surface.

The first report of salivary gland tissue in the tonsillar fossa was in 1928 by Neumann et al. followed by a report of the 13th case by Sanderson et al. in 1952. The recent literature since 1982 contains only four isolated case reports of aberrant salivary gland in the palatine tonsil. A.R Banerjee et al. reported a case of ectopic salivary gland associated with first branchial arch defect that presented as a large horse-shoe shaped mass, obstructing the palatine tonsillar region in a child. Another report describes the presence of salivary gland tissue as an incidental finding during upper airway papilloma resection. The salivary gland in the palatine tonsil in yet another child grew into a painless unilateral exophytic mass. Hun-Soo Kim et al. reported a case of acinic cell carcinoma of ectopic salivary tissue located in the tonsil. The ectopic salivary gland tissue in our patient consisted of a few scattered lobules of acinar type.
pure mucinous acini accompanied by ducts mostly in the submucosal location with extension into the muscle fibers surrounding the tonsillar fossae.

CONCLUSION
It is not usual to find salivary gland tissue in the tonsillar fossa. The possibility of aberrant salivary gland tissue may be considered in the differential diagnosis of tonsils with unusually lobulated appearances during surgical exploration. As it behaves like its normal counterpart and gives rise to neoplasm, such tonsils must be removed completely.

REFERENCES