

## Branchial Cleft Cysts

Patients with first branchial anomalies usually present with a unilateral painless swelling of the parotid gland. Bilateral swelling is rare. Work has classified these cysts as types I and II (Work 1977). Type I branchial defects are duplication anomalies of the membranous external auditory canal. These defects are composed of ectoderm only. They are located within the preauricular soft tissues and parotid gland and present as sinus tracts or areas of localized swelling near the anterior tragus. Complete surgical removal is curative. Type II branchial anomalies are less common than type I anomalies. This defect is a duplication anomaly consisting of an anomalous membranous and cartilaginous external auditory canal. Unlike type I cysts, type II cysts are composed of ectoderm and mesoderm. They commonly present in the upper neck and are located posterior or inferior to the angle of the mandible and can extend into the external auditory canal or middle ear cavity. Sinus tracts are common and abscess formation may also occur. Complete surgical excision during an asymptomatic period is the treatment of choice. The reader is directed to chapter 13 for a more detailed discussion and illustration of these pathologic processes.

## Summary

- Cysts of the salivary glands may be associated with neoplasms or occur independently.
- While these lesions are collectively referred to as cysts, many are not actually lined by epithelium.
- The ranula and mucocele are examples of mucous escape reactions that are not lined by epithelium.
- Severance of a salivary duct due to trauma with resultant pooling of mucus into surrounding tissues is the pathophysiology of the mucous escape reaction.
- Excision of the salivary gland with or without the associated mucous escape reaction represents curative therapy for this process.
- The mucous escape reaction is most commonly seen in the minor salivary glands.
- Mucous retention cysts are lined by epithelium, but are very rare.
- When mucous retention cysts do occur, they seem to be most common in the major sali-

vary glands, particularly the parotid gland. Simple excision is the treatment of choice.

- As many as 5–10% of patients with HIV-1 infection have been reported to have parotid swelling with the incidence increasing to approximately 20% in AIDS patients. Lymphoepithelial cysts account for the majority of these swellings.

## References

- Baurmash HD. 1992. Marsupialization for treatment of oral ranula: A second look at the procedure. *J Oral Maxillofac Surg* 50:1274–1279.
- Baurmash HD. 2007. A case against sublingual gland removal as primary treatment of ranulas. *J Oral Maxillofac Surg* 65:117–121.
- Bhaskar SN, Bolden TE, Weinmann JP. 1956a. Experimental obstructive adenitis in the mouse. *J Dent Res* 35:852–862.
- Bhaskar SN, Bolden TE, Weinmann JP. 1956b. Pathogenesis of mucoceles. *J Dent Res* 35:863–874.
- Braun TW, Sotereanos GC. 1982. Cervical ranula due to an ectopic sublingual gland. *J Max Fac Surg* 10:56–58.
- Cataldo E, Mosadomi A. 1970. Mucoceles of the oral mucous membrane. *Arch Otolaryngol* 91:360–365.
- Catone GA. 1995. Sublingual gland mucous escape: Pseudocysts of the oral-cervical region. In: Carlson, ER (ed.). *The Comprehensive Management of Salivary Gland Pathology*. Philadelphia: W.B. Saunders, pp. 431–477.
- Catone GA, Merrill RG, Henny FA. 1969. Sublingual gland mucus-escape phenomenon—treatment by excision of sublingual gland. *J Oral Surg* 27:774–786.
- Colebunders R, Francis H, Mann JM et al. 1988. Parotid swelling during human immunodeficiency virus infection. *Arch Otolaryngol Head Neck Surg* 114:330–332.
- Dardick I. 1996. Mucocele and sialocysts. In: *Color Atlas/Text of Salivary Gland Tumor Pathology*. New York: Igaku-Shoin Medical Publishers, pp. 131–141.
- Eversole LR. 1987. Oral sialocysts. *Arch Otolaryngol Head Neck Surg* 113:51–56.
- Ferraro FJ, Rush BF, Ruark D, Oleske J. 1993. Enucleation of parotid lymphoepithelial cyst in patients who are human immunodeficiency virus positive. *Surg Gyn Obstet* 177:525–527.
- Koudelka BM. 1991. Obstructive disorders. In: Ellis GL, Auclair PL, Gnepp DR (eds.). *Surgical Pathology of the Salivary Glands*. Philadelphia: W.B. Saunders, pp. 26–38.
- Marcussen DC, Sooy CD. 1985. Otolaryngologic and head and neck manifestations of acquired immunodeficiency syndrome (AIDS). *Laryngoscope* 95:401–405.