

## NEVPC Case X

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**SIGNALMENT:** 8-year-old female spayed miniature Australian shepherd

### HISTORY:

The patient presented to a private specialty referral center in February of 2021 for surgical excision of a large, soft, fluctuant mass in the left cranial cervical region, which had been present and slowly growing since May of 2018. The mass was excised and submitted to the University of Florida's surgical pathology service.

**GROSS FINDINGS:** The mass, submitted as "left mandibular/sublingual salivary gland," floated in formalin and measured 9 x 5.9 x 4.4 cm. It was firm, tan to brown, and was subdivided into variably-sized lobules by thin bands of fibrous stroma.

### HISTOPATHOLOGIC FINDINGS:

The sections are composed of multiple variably-sized lobules of well-differentiated salivary glandular and ductular epithelium, with normal architecture, which are widely separated by variably thick bands and aggregates of well-differentiated adipose tissue. Scattered throughout the interstitium of the lobules, there are often low to moderate numbers of lymphocytes and plasma cells, sometimes admixed with lower numbers of neutrophils. Occasionally, lymphocytes form small to moderately sized, perivascular, nodular aggregates. In some areas the proportion of ducts is moderately increased relative to the number of glandular acini. Many of these ducts are mildly to rarely markedly ectatic and are filled with low numbers of neutrophils along with a small amount of homogeneous, pale eosinophilic to amphophilic secretory material. The ductular epithelium is sometimes mildly hyperplastic and jumbled, and ductular basement membranes are sometimes surrounded by a mildly increased amount of wavy, eosinophilic collagen fibers.

### MORPHOLOGIC DIAGNOSIS:

Salivary lipomatosis, chronic, severe, left mandibular salivary gland, with associated:

- a. Sialoadenitis, lymphoplasmacytic and mildly neutrophilic, diffuse, chronic, mild to moderate, with glandular hyperplasia, multifocal ductular hyperplasia, multifocal mild to marked ductular ectasia, and multifocal mild lobular and periductular fibrosis with mild glandular atrophy

### DISCUSSION:

Salivary lipomatosis (also known as lipomatous/fatty infiltration of the salivary gland or interstitial lipomatosis) is a rare, benign, non-neoplastic entity in dogs that causes marked soft to fluctuant enlargement of salivary glands due to the deposition of large amounts of adipose tissue within the interstitium of affected glands<sup>1</sup>. Though the cause is undetermined, the majority of cases have been associated with chronic salivary inflammation and obstructive processes<sup>1</sup>. Indeed, the glandular tissue in this sample exhibited mild to moderate, chronic inflammation as well as multifocal ductular ectasia and periductular fibrosis, supporting the occurrence of chronic

ductular obstruction. This condition is most often described affecting the parotid gland, but has also been reported in the mandibular salivary glands<sup>1</sup>.

The primary differential for this condition is a sialolipoma. These have a nearly identical histologic appearance, and in the past, criteria for diagnosis of a sialolipoma versus salivary lipomatosis was not clear. In the human literature, diagnostic guidelines that allow more accurate diagnosis and differentiation of these similar lesions have recently been published<sup>2</sup>. The main criteria for the diagnosis of a sialolipoma is the recognition of a fibrous capsule surrounding the lesion<sup>1,2</sup>. Thus, accurate diagnosis often requires complete excision to recognize this fibrous capsule. No capsule was recognized in this lesion, thus ruling out a sialolipoma. In human medicine, salivary lipomatosis and sialolipomas are classified as separate conditions because the latter is considered a true neoplasm whereas the former is considered a non-neoplastic process that likely represents a reactive response to underlying inflammatory and/or obstructive processes<sup>1</sup>.

Regardless of the diagnosis, both entities are benign and thus have an excellent prognosis following complete excision<sup>1</sup>.

#### REFERENCES:

1. Serras, Ana Rita, et al. "Lipomatosis of the parotid salivary gland: 2 case reports and review of the literature on fat-containing salivary gland lesions." *International journal of veterinary science and medicine* 6.2 (2018): 253-257.
2. Agaimy, Abbas. "Fat-containing salivary gland tumors: a review." *Head and neck pathology* 7.1 (2013): 90-96.