

Ranula

A ranula is a clear or bluish fluid collection or cyst, also known as a mucocele, that forms in the lower part of the mouth under the tongue. In most cases, they are painless, slow-growing benign growth and can vary in size. Some cysts remain small, but some may be large enough to interfere with eating, chewing and swallowing. It is caused by obstruction of a salivary gland. An injury can damage the ducts that move saliva from the sublingual salivary gland into the oral cavity, causing a blockage. When saliva can't properly drain, it accumulates in the gland and forms a cyst. Minor trauma can include biting the lower lip or cheek or getting hit in the face can cause the damage to the floor of the mouth interfering with drainage. Though sublingual salivary gland is usually the main culprit, blockage from the submandibular duct or the minor salivary glands in the floor of the mouth can also cause ranula to form. There are two types of ranulas: oral and cervical. Oral ranulas result from pooling of mucus superior to the mylohyoid muscle, while cervical ranulas are caused by mucus extravasation along the fascial planes of the neck.

Ranulas and mucoceles are the most common disorder of the salivary glands. While mucoceles have a prevalence rate of 2.4 cases per 1000 people, ranulas are less common with a prevalence rate of 0.2 cases per 1000 people. The disorder does not discriminate against sex or race. When it comes to age however, younger people under the age of 20 are more likely to develop it as they make up 70% of the cases. Though it seems to target the youth, ranulas are rarely found in infants. Those with habits of biting of the lips or inside of the cheeks are likely to be at a higher risk of having ranulas.

Ranulas presents as painless, asymptomatic swellings that have a relatively rapid onset and varies in size. If the ranula is deeper, it tend to take on a normal mucosal coloration and if it lies more superficial, it appears more bluish in color. Overall they are usually large, unilateral, translucent bluish masses and the duration of the lesion is usually three to six weeks. Symptoms of pain, tenderness, or fever are rarely seen due to infections associated with ranula are not typical. Also rare but possible are large ranulas that can interfere with speech and cause mastication problems, or even breathing and swallowing difficulties because of the upward and medial displacement of the tongue due to a large ranula.

Diagnosis of a ranula could be tricky and confused with other disorders. The broad differential diagnosis can include hemangioma, lymphangioma, dermoid cyst, benign or malignant salivary gland neoplasm, lipoma, abscess, venous lake, fibroma or benign mesenchymal neoplasm. The diagnosis of ranula is often a clinical one based on a typical history, appearance and location of the cyst. Tests with a high-resolution sonogram can be done to detect calculi, abscesses and cysts, and can even correctly assess up to 90% of benign versus malignant tumors. Using color Doppler imagining, vascular lesions can be seen more clearly. A computed tomography scan (CT scan) or magnetic resonance imaging (MRI) are not usually performed unless the large ranula is in the mylohyoid muscle and present in the lateral aspect of the neck, as they can be more a life-threatening case. If this is the case, surgery may be needed to remove it. Though a CT scan or MRI provides great images, they do not differentiate between a benign and cancerous cell; to do this a biopsy would be required.

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Treatment of ranulas differs depending on its size. Small ranulas that do not cause problems may not require any treatment and resolve on its own. For enlarged ranulas, especially if it interferes with swallowing or speaking, treatment is required. The treatment of choice is surgical removal of the lesion. Complete surgical excision with the associated glandular components, including the affected salivary gland is preferred so the recurrence of the ranula would be less likely. Other options of treatment include corticosteroid injection and cryotherapy (freezing the cyst). These would help with the appearance of the ranula as well as with any pain associated with the cyst. Aspiration and marsupialization have been done in the past and to some extent still used today; however, the possibility of the ranula coming back is quite high with these techniques. The treatment may drain the cyst temporary but the fluids could just accumulate again. The prognosis of ranulas is good, either by resolving on its own if it is small or by surgical intervention if it is too big for the body to remove by itself. It is in extremely rare cases that it will become life-threatening.

Ranula is relevant to a dental hygienist because the cyst could be a physical obstruction and may impair visualization. Assessment of the cyst including appearance, size, and color should be documented. Proper mechanics and adjustments would be necessary to visualize around the cyst. The ranula may be more sensitive and at risk for rupture so special attention should be given when cleaning the surrounding area. The size and location of the ranula plus the swelling of the bottom of the mouth may make it difficult for the patient to move his/her tongue during a cleaning and could affect dental hygiene home care. Patient education should be given regarding the ranula, such as the importance of seeking professional help if the ranula begins to

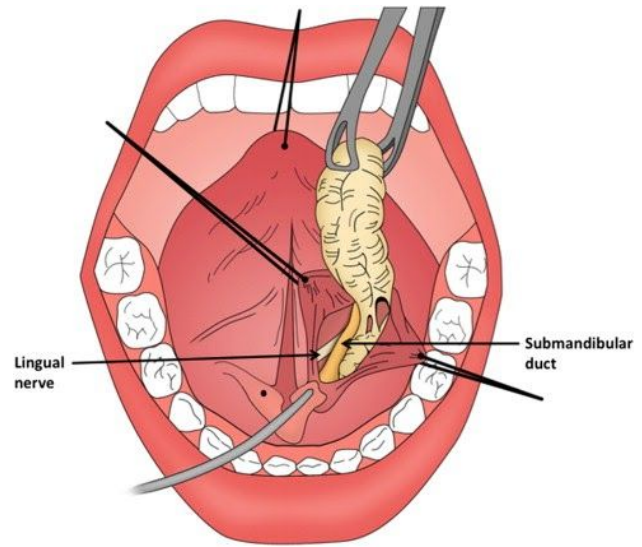
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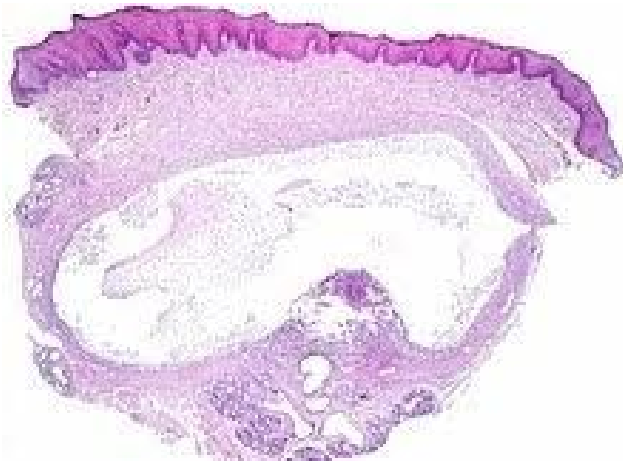
interfere with speech, swallowing or breathing. Avoidance of trauma including biting of lips and cheeks should also be reinforced to the patient.



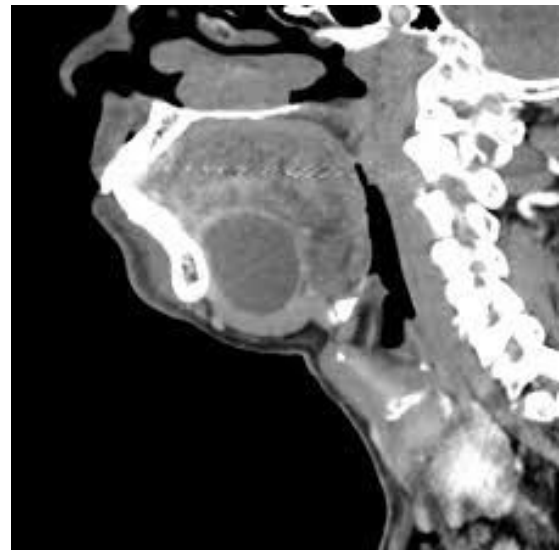
- Ranula clinical presentation



- Ranula removal



- Ranula biopsy



- Ranula radiographic

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