Managing Salivary Duct Blockage

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CLINICAL SCENARIO

- Young female – early 20s. Likes spicy food. Intermittent swelling of the submandibular gland area on right side.
- Swelling is not painful, but it is uncomfortable.
- Massaging the gland area provides relief for a few days.
- Patient is rinsing with salt and water.
- Use of ibuprofen does not relieve swelling but it does not make it worse.
- Patient has limited access to a specialist because of rural location and pandemic.

DIAGNOSIS

- The fact that the swelling is intermittent suggests that it is not a problem with the lymph nodes and more likely a problem with the salivary gland.
- Association of symptoms with eating also points to a problem with the salivary glands as the salivary glands produce more saliva when eating.
- Relief of symptoms when the patient massages the area suggests that the salivary duct may be partially obstructed and the massaging is helping the blocked saliva to come out.
- The fact that the pain does not improve with ibuprofen suggests that the source of the pain may be an obstruction of the duct.
- Conclusion: likely an obstruction of the salivary duct, possibly by a stone.

CONFIRMATION OF DIAGNOSIS

- If the blockage is sufficiently calcified, it can usually be seen on an occlusal radiograph. If the stone is big enough it may also be visible on a panoramic radiograph.
- If the area is stimulated it may be possible to establish whether saliva is still coming out of the duct or if it is completely blocked.
- Teledentistry – with the aid of instructional images/video, the patient may be able to self-examine. The detection of anything hard in the salivary gland will confirm

the diagnosis of a blockage, most likely a stone. This is the most common cause of pain and swelling in the salivary gland.

- Confirm by ultrasound (if available).

CAUSES OF BLOCKAGES

- Stone (most common)
- Trauma
- Foreign body
- Tumor close to the duct
- Autoimmune disorders that cause fibrotic tissue formation in the salivary gland and duct. E.g. Sarcoidosis or Sjögren Syndrome.

Note: sometimes an exam and x-ray will confirm the presence of a stone. If a stone is not detected or there are associated systemic symptoms, such as dry eyes or fever, then the patient should be referred for further investigation of the underlying cause.

PREVENTION

- Massage the swollen area.
- Hydrate to keep the area flushed.
- If the duct is not fully blocked, the patient can take Pilocarpine to stimulate saliva production and flush the stone out.
  [Note: if after 2 days the swelling is getting worse, Pilocarpine should be discontinued]

REMOVAL OF A STONE

The removal of a stone depends on where the stone is located in the duct:

- If the stone is close to the orifice and can be seen or touched, then it can be successfully removed.
- If the stone is in the middle of the duct or close to the salivary gland, attempting to remove the stone is not recommended. If the duct is cut and cannot be closed properly there can be resulting scar tissue. Better to refer these cases to an oral and maxillofacial surgeon.