RANULA

Alternative names: Spanish: Ránula; Portuguese: Râ nula

Written by Luis Felipe Zanolli de Solminihac and Johan Fagan

Background Information

Definitions of levels of care (in this guideline)

- Level 1: Community healthcare worker/non-doctor
- Level 2: Medical doctor
- Level 3: ENT Surgeon

Definition

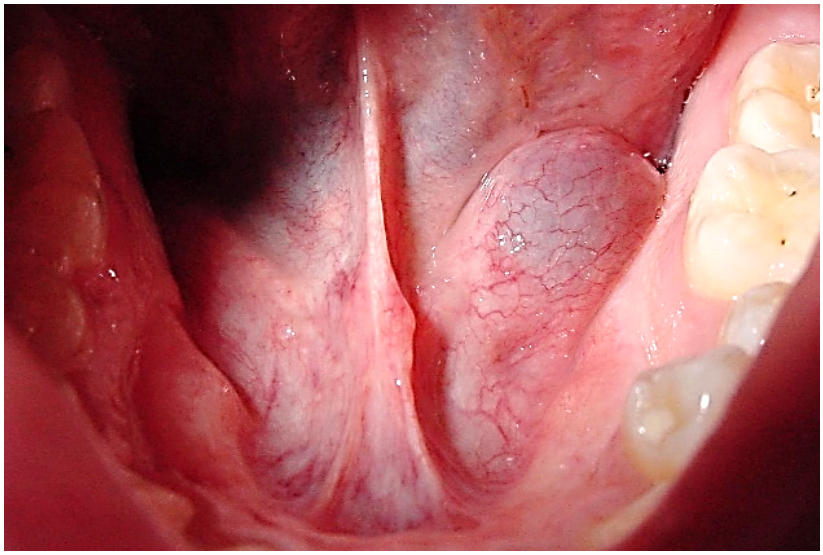
A collection of extra-glandular and extraductal saliva in the floor of the mouth originating from the sublingual salivary gland. It can track into the neck (plunging ranula) or into the parapharyngeal space. It is a pseudocyst as it does not have an epithelial lining.

Preferred treatment

- Aspiration/incision and drainage / marsupialisation is associated with recurrence
- A seton technique has also been advocated for intraoral ranula[1,2].
- Transoral removal of the sublingual salivary gland is curative. Excision of the cyst is not required as it will resolve after removal of the sublingual salivary gland[3,4].

Signs may include

- Soft submucosal swelling in the floor of the mouth (Figure 3.1.1).
- A plunging ranula extends into the submandibular triangle of the neck through a defect in the mylohyoid muscle, or less commonly, passes behind the posterior edge of the muscle.
- A ranula may also track posteriorly along tissue planes into the parapharyngeal space.



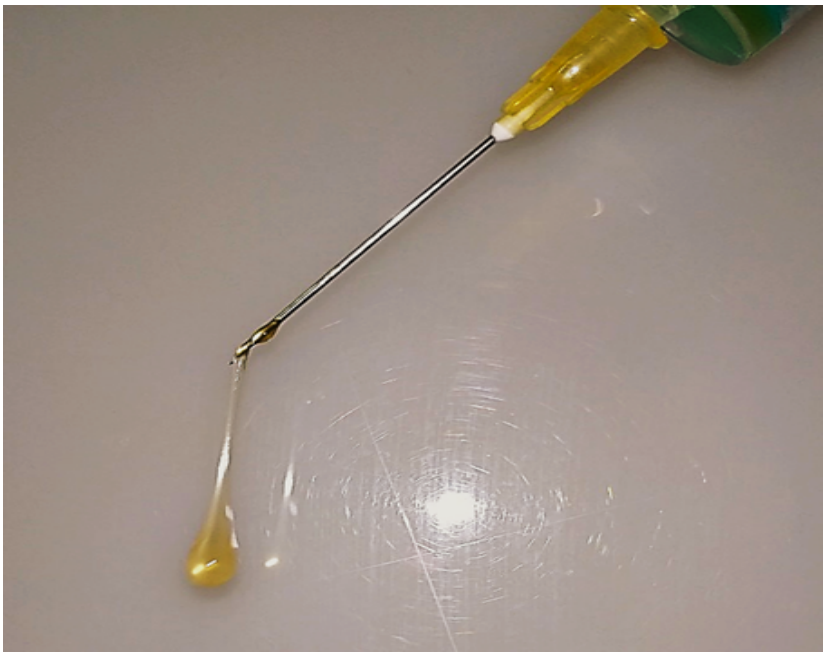
Examination and investigations

General:

- Soft submucosal swelling in the floor of the mouth and/or submandibular region.

Level 1:

- Aspirate the liquid content in the clinic: A thick, honey-like straw-coloured aspirate (old saliva) is diagnostic of ranula (Figure 3.1.2).



Level 2:

- Aspirate the liquid content in the clinic to make the diagnosis (Figure 3.1.2).
- ***No additional investigations*** such as ultrasound or CT or MRI are required for diagnosis or surgical planning.

Level 3:

- As for Level 2.

Management

General:

- The objective is to remove the source of the saliva *i.e.* the sublingual salivary gland on the side of the ranula.

Recurrence rates with various procedures[4]*:*

- Aspiration: ~80%

- Sclerotherapy: 49%
- Excision of cyst: 44%
- Marsupialization: 24%
- Sublingual gland excision: 1%

Level 1:

- Confirm diagnosis by needle aspiration.
- Refer to a hospital that can resect the sublingual gland.
- If not possible to refer, then aspirate/marsupialize/seton technique for the ranula in the floor of the mouth and aspirate the plunging ranula under local anaesthesia, knowing that it has a significant chance of recurrence.

Level 2:

- Confirm diagnosis by needle aspiration.
- No imaging is required as it does not change management.
- Refer to a hospital that can resect the sublingual gland.
- Alternatively, aspirate/marsupialize/seton technique for the ranula and aspirate the plunging ranula under local anaesthesia, knowing that it has a significant chance of recurrence and refer if it recurs.

Level 3:

- Confirm diagnosis by needle aspiration.
- No imaging is required as it does not change management.
- Transoral excision of sublingual salivary gland, and aspirate plunging ranula component.

Further reading

1. Gaffuri, M., Torretta, S., Pignataro, L. & Capaccio, P. The piercing-stretching suture technique for the treatment of simple oral floor ranula. *J Laryngol Otol* **136**, 68–72 (2022).
2. Matondkar, S. P., Yavagal, C. & Mandroli, P. S. Modified micro-marsupialization as an alternative treatment for the management of ranulas in children. *Natl J Maxillofac Surg* **10**, 95–97 (2019).
3. Fagan, J. Ranula and sublingual salivary gland excision. *Open Access Atlas of Otolaryngology, Head and Neck Operative Surgery*
https://vula.uct.ac.za/access/content/group/ba5fb1bd-be95-48e5-81be-586fbaeba29d/Ranula%20and%20sublingual%20salivary%20gland%20excision.pdf.
4. Patel, M. R., Deal, A. M. & Shockley, W. W. Oral and plunging ranulas: What is the most effective treatment? *Laryngoscope* **119**, 1501–1509 (2009).