Giant Submandibular Sialolith; A Case Report and Literature Review

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INFO...

- INTRODUCTION
- TALK ABOUT PATHPHYSIOLOGY
- CASE PRESENTION
- LITERATURE REVIEW
- Conclusion
- QUESTION TIME
**INTRODUCTION**

- Sialolithiasis is the most common disease of the salivary glands.
- Submandibular gland is the most commonly affected site (80% to 92%)
- Submandibular stone close to the hilum of the gland tends to become large before they become symptomatic
Sialoliths measure from 1 mm to less than 1 cm in size.

Giant salivary gland stones (GSGS) are defined in literature as those stones measuring over 1.5 cm and have been rarely reported in the medical literature.
GSGS measuring over 3 cm are extremely rare, with only few reported cases.
PATHOPHYSIOLOGY
Why submandibular gland ?
Length and irregular course of Wharton’s duct

Position of ductal orifice

Size of orifice smaller than duct lumen
Submandibular saliva

- High mucin content
- Alkaline pH
- High phosphate & calcium
CASE Presentation

• A 37 year-old gentleman

**Unilateral hard swelling** in the left submandibular area of about 2 years duration THAT BECOME PAINFUL 2 WEEKS.

He had no history of odenophagia, dysphagia, muffled voice, shortness of breath, or recent dental procedure, no trismus, no dry mouth or eye.

The swelling was not related to food intake, with no aggravating or relieving factors and no history of associated pain.
Recent exposure to sick contacts (mumps)?

Radiation history?

Current medications
• V/S STABLE AFEBRILE
• On our initial evaluation, neck examination revealed **asymmetry** along the left submandibular area.

• On palpation, **swollen area** corresponding to the anatomic location of submandibular salivary gland
The swollen area palpated bimanually (extra orally and through the mouth), it was hard and tender. The floor of mouth along the submandibular duct in left side was swollen, with no color changes of the surrounding mucosa.

Cranial nerve intact
Neck ultrasound showed left submandibular duct stone with an associated abscess confirmed by CT scan.

Findings on blood and serum biochemistry were within normal limits.
Management

• Medical management was started by I.V. antibiotic for 10 days

• Followed by left submandibular intra-oral stone extraction with marsuplization of the duct two weeks later under general anesthesia.
• The calculus was dissected free
• The sialoliths was about 3.6 cm
• Patient had smooth recovery with no complications in follow up. The symptoms resolved after operation.
DISCUSSION

The Giant salivary gland stones are rare findings in clinical oral pathology, all of them occurring in male patients.

The Giant salivary gland stones have been reported both in salivary glands and in salivary ducts. Stones larger than 3cm are rare.
A review of literature in 2007 reported 16 cases of salivary stones having a size up to 35mm with the largest stone reported measured 55mm.

A sialooral fistula develops most likely
WHAT THE ROLE OF US & CT SCAN?
Sialography conventionally has been considered as the gold diagnostic standard.
Giant sialoliths of a remarkable size is a diagnostic and therapeutic challenge for the clinician. It needs careful evaluation prior to management.
Sialolithiasis Treatment

- None: antibiotics and anti-inflammatories, hoping for spontaneous stone passage.

- Stone excision:
  - Lithotripsy
  - Interventional sialendoscopy
  - Simple removal (20% recurrence)

- Gland excision
Submandibular stone, are typically removed surgically.
Newer treatment methods are currently available such as extracorporeal short-wave lithotripsy and

The newer management options are effective alternatives to conventional surgical excision especially for smaller stone.
0.018” guide wire placed retrograde through duct orifice.

Light of sialendoscope.
Conclusion

- Giant submandibular gland stone are rare.
- There are various methods available for the management of salivary stones.
- Asymptomatic giant sialolith of remarkable size may pose both diagnostic and therapeutic challenge for the clinician.
- For giant sialoliths, transoral sialolithotomy with sialodochoplasty or sialadenectomy remains the mainstay of management.
REFERENCES

- Cavina C, Santoli A: Some cases of salivary calculi of particular interest [in Italian]. Minerva Stomatol 14:90, 1965
THANK YOU