Salivary Gland Disorders

Disclaimer

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Background

About salivary gland disorders

➢ There are 3 paired major salivary glands: the parotid, submandibular, and sublingual glands.
➢ Acute bacterial sialadenitis is the most common salivary disorder, especially in the elderly when dehydrated.
➢ The submandibular gland is more susceptible to stones, as it produces thick mucoid saliva that passes along a tortuous duct against gravity.
➢ Tumours occur most commonly within the parotid, and are usually benign.
➢ Bilateral salivary gland enlargement is typically seen in systemic conditions such as Sjögren’s syndrome, diabetes, alcoholism, or viral infections, e.g., mumps.

Red flags

• Difficulty breathing
• Focal swelling within a salivary gland or neck lumps
• Facial nerve palsy
• Persistent bacterial sialadenitis for > 7 days with fluctuant collection and sepsis
• Sialadenitis in immunocompromised patient

Assessment

1. Establish the cause of salivary gland swelling by asking about:
   • which salivary glands are affected.
   • whether swelling is focal, generalised, unilateral, or bilateral.

Bilateral

➢ Usually due to a systemic disorder e.g., Sjögren’s syndrome, diabetes, alcohol dependency.

   Sjögren’s syndrome
   o Generally affects the parotid gland. Uncommon in the submandibular glands.
   o Associated with other autoimmune conditions e.g., rheumatoid arthritis, systemic lupus erythematosus (SLE).
   o Other symptoms include dry eyes and dry mouth.
➢ Consider mumps if child is not vaccinated and has travelled overseas or to low-vaccination areas of Australia.
➢ Post mumps vaccination (10 to 14 days)
➢ Can be other viral causes

Unilateral

➢ If unilateral, usually sialoadenitis with or without stones, and can be acute, chronic, or recurrent.

   Sialoadenitis
   o Inflammation of the gland
Usually a bacterial infection, caused by oral commensals, or \textbf{Staphylococcus aureus}

- Only about 15\% are caused by stones, which are usually radiolucent.
- Consider mumps if child is not vaccinated and has travelled overseas or to low-vaccination areas of Australia.
- Post mumps vaccination (10 to 14 days)

**Focal swelling**

- Focal swelling is usually a tumour.
- 60\% are benign and 40\% malignant.
- All need \textit{ENT assessment}.

  - \textit{timing} of pain and swelling

**Timing of pain and swelling**

\textit{Pain and swelling of salivary glands at meals times is associated with salivary ducts stones.}

  - \textit{systemic symptoms}

**Systemic symptoms**

\textit{Systemic symptoms such as fever, dry eyes, and dry mouth are associated with Sjögren's syndrome.}

  - duration of symptoms.

2. Look for discharge from or a stone in:

  - the parotid gland duct opening (Stensen's duct), which is opposite the 2nd upper molar
  - the submandibular gland duct opening (Wharton's duct), which is on either side of the tongue frenulum.

If there is a purulent discharge, take a swab.

3. If there is focal swelling:

  - facial nerve (muscles of facial expression).
  - assess head and neck region for skin lesions
  - look for any metastatic neck lumps

4. Arrange investigations:

  - If \textit{suspected parotid tumour}:

**Suspected parotid tumour**

Symptoms include:

- hard mass > 6 weeks
- pain
- rapid or slow-growing focal swelling
- fixation to local structures
- facial nerve palsy.
• arrange an initial neck ultrasound and/or CT neck.
• consider a fine needle aspiration (FNA).

**Fine needle aspiration (FNA)**

- The architecture of tumours such as lymphomas cannot be determined from a needle aspirate, and possible sarcoma should not be needled due to risk of tumour spread.
- Ensure any previous diagnostic ultrasound images or reports accompany the patient.
- Out-of-pocket expenses apply, however patients on a pension or healthcare card are bulk-billed.
- Technique is important, so FNA is best performed by specialist radiologists or pathologists.

If sialoadenitis present and:
- no stone is clinically palpable, arrange a non-contrast CT.
- a stone is clinically palpable, no imaging is required.
If recurrent salivary gland swelling:

- non-contrast CT is the investigation of choice.
- sialograms, plain films, and ultrasounds have very limited value.

### Management

1. Arrange immediate ENT referral if:
   - difficulty breathing.
   - systematically unwell.
   - underlying abscess, for intravenous antibiotics and/or surgical drainage of the abscess.
   - sialadenitis in immunocompromised patient.
   - facial nerve palsy.

2. If confirmed or suspected tumour or solid mass of salivary gland, arrange urgent ENT referral.

3. If acute sialoadenitis, provide treatment and advice:
   - Treat empirically with flucloxacillin (or erythromycin if penicillin allergy). Adjust after swab results.
   - Advise patient to:
     - try regular massage. Massage forwards from the ear to the corner of the mouth.
     - keep well hydrated, take pain relief, and rest.
     - regularly use sialogogue e.g., lemon wedges, boiled sweets, or chewing gum, to stimulate flow of saliva and flush the infection out.
   - If a stone is seen at the opening of a salivary duct, consider removal.

   **Stone removal**
   - Advise the patient to:
     - fast for about 6 hours.
     - drink some lemon juice.
     - place a slice of lemon on the tongue.
   - Place the round end of a Jobson Horne probe over the meatus and press inward.
   - Apply digital pressure from the opposite side of the frenulum.
   - If failure to resolve within 7 to 10 days, arrange urgent or routine ENT referral.

4. If symptomatic salivary stones and recurrent symptoms unresponsive to treatment, arrange urgent or routine ENT referral.

5. If Bilateral symptoms, manage the underlying condition.

6. If Sjögren’s syndrome suspected:
   - arrange urgent or routine rheumatology referral
   - and if dry mouth, consider non-acute dental services assessment.

7. If mumps or HIV causing bilateral symptoms, arrange urgent infectious diseases referral.
Referral

• Arrange immediate ENT referral if:
  o difficulty breathing.
  o systematically unwell.
  o underlying abscess.
  o sialadenitis in immunocompromised patient.
  o facial nerve palsy.
• If confirmed or suspected tumour or solid mass of salivary gland, arrange urgent ENT referral.
• Arrange urgent or routine ENT referral if:
  o symptomatic salivary stones.
  o recurrent stones unresponsive to treatment.
  o sialadenitis failing antibiotic therapy.
• If Sjögren’s syndrome is suspected:
  • arrange urgent or routine rheumatology referral.
  • and if dry mouth, consider urgent or routine dental services referral.
• If mumps or HIV causing bilateral symptoms, arrange urgent infectious diseases referral.

Information

For health professionals

Further information

➢ American Family Physician – Diagnosis and Management of Sjögren Syndrome
➢ Medicine Today – A Guide To Salivary Gland Disorders
➢ Patient – Professional Articles:
  o Salivary Gland Disorders
  o Salivary Gland Tumours

For patients

➢ Better Health Channel – Sjogren’s Syndrome
➢ Patient – Salivary Gland Stones (Salivary Calculi)

Sources

References