Disclosures

None
Anatomic Anomalies

Parotid:
- Normal ductal system
- Accessory lobe
- Anomalous drainage acquired and congenital

Submandibular
- Relationship to lingual nerve and sublingual gland

Sublingual
- Ducts of Rivinus
- Bartholin’s duct
Anatomic Anomalies

Parotid: Normal ductal system / Accessory Lobe

Resolution of swelling 5 months later
Anatomic Anomalies

Parotid: Normal ductal system / Accessory Lobe
Anatomic Anomalies

Parotid: Accessory Lobe Stone
Anatomic Anomalies

Parotid: Accessory Lobe Stone
Anatomic Anomalies

Parotid: Anomalous drainage acquired and congenital

Secondary opening with hemorrhagic mucoid material draining adjacent stone

Natural ostium

10 weeks after removal of stones with ductoplasty (connecting orifices)
Anatomic Anomalies

Submandibular

  Relationship to lingual nerve and sublingual gland

Sublingual

  Ducts of Rivinus

  Bartholin’s duct
Anatomic Anomalies

Submandibular

Relationship to lingual nerve and sublingual gland
after severing attachment of gland to lingual nerve

digastric muscle

gland remains attached only by duct passing under lingual nerve
Anatomic Anomalies

Sublingual glands secrete directly through mucosa into FOM via multiple ducts of Rivinus and Bartholin’s duct that empties into the Wharton’s duct.

Sublingual gland resection for plunging ranula with preservation of lingual nerve.
Salivary Foreign Bodies

Philosophy: Endogenous v Exogenous

Sialolithiasis theories:
1. Intracellular microcalculi excreted in canal as nidus to calcify
2. “Mucus plugs’ as nidus to calcify
3. “aliments, substances, or bacteria in the oral cavity migrate into the salivary ducts for further calcification”

Marchal et al: Retrograde Theory in Sialolithiasis Formation arch Otolaryngol 127, Jan 2001 pp 66-68

Published reports

<table>
<thead>
<tr>
<th>Blade of grass</th>
<th>Pin needle</th>
<th>Piece of broom straw</th>
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<tbody>
<tr>
<td>Hair brush thistle</td>
<td>Vegetable fiber</td>
<td>Fingernail</td>
</tr>
<tr>
<td>Fish bone</td>
<td>Limb of shrimp</td>
<td>Feather</td>
</tr>
<tr>
<td>Shrapnel</td>
<td>Piece of Hair</td>
<td>5 Cases of Fish Bones</td>
</tr>
<tr>
<td>Fish bone</td>
<td>Vegetable nidus</td>
<td>Wood-like strands</td>
</tr>
</tbody>
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Salivary Foreign Body Examples:

Parotid: percutaneous welding slag

Submandibular: migrated stent (20 gauge angiocatheter)

“google” or “bing” or otherwise search: “Iowa Protocols” then search in the protocols:

“foreign body”

or

“sialendoscopy”
Submandibular Duct Foreign Body (retained salivary stent)

return to: Sialendoscopy  SEE IMAGES AND VIDEO BELOW

History: Retained 20 gauge angiocatheter in submandibular duct placed after ductoplasty with stone removal. Time frame below:

May-June: Firm swelling right submandibular gland with pain intensified with meals associated with ‘slimy type of strong salty taste in mouth’

June 22: Transoral right submandibular sialodochoplasty under local anesthesia with heavy sedation. Placement of 20 gauge angiocatheter until stone encountered, incision over angiocatheter into duct through floor of mouth mucosa with removal of stone. Angiocatheter secured with purse-string suture.

perceived reaction to suture material with loss of control of stent resected into duct; symptoms of swelling and pain markedly improved

July 13: Transoral right submandibular duct exploration under local anesthesia with sedation in effort to remove retained angiocatheter. Cannulation of duct orifice successful as was entry into duct through floor of mouth incision through previous scar overlying previous entry site into duct. Intra-operative radiography identified successive images demonstrated further positioning of catheter tip deeper into gland.

no further acute swelling or pain of the gland but noting once a week or so perception of discomfort identifying that ‘all is not right with that gland’

Nov 26: Referral to the U of Iowa - options discussed: observation / submandibular gland resection / sialendoscopy with transoral endoscopic removal

Dec 5: Right submandibular sialodochoplasty with duct dilation and removal of 3 cm foreign body (20 gauge angiocatheter tip)

Click on image to enlarge; advance to next with cursor over right mid border
Parotid Sialogram with Sialendoscopy for Foreign Body Removal

A 75 year old male presents complaining of pain and swelling in the area of the left parotid gland. On examination, there is tenderness and swelling in the left parotid area. The initial diagnosis was a salivary stone. However, a sialogram showed a foreign body located in the left parotid gland. The patient was referred for sialendoscopy.

The patient underwent sialendoscopy under general anesthesia. A 4 French soft dilator was used to dilate the parotid duct. A foreign body was identified and removed using a 0.4 mm basket. The patient was discharged the same day with no complications.

The foreign body was located in the midportion of the gland. The procedure was successful, and the patient's symptoms improved significantly. The patient was advised to follow up with the otolaryngologist for further evaluation.

Procedure: Left parotid sialendoscopy with foreign body removal.