Sialoendoscopic Approaches to the Parotid Duct and Gland For Sialadentis / Sialolithiasis

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Disclosures

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Transoral Open Sialodochotomy / Sialodochoplasty

Transoral Sialendoscopy

Transfacial Open Duct Surgery (+/- Sialendoscopy)

Parotidectomy

Intraoperative Ultrasound Guidance

Transoral Open Sialodochotomy / Sialodochoplasty

Distal Stones / Stenosis

Transoral Sialendoscopy

Middle Duct - Hilar Stones / Stenosis

Transfacial Open Duct Surgery (+/- Sialendoscopy)

Impacted Stones / > 5-7mm Stones / Parenchymal stones
Failed Sialendoscopy

Parotidectomy

Parenchymal Stones / Multiple Stones / Generalized fibrosis / Fistula
Failed Sialoendoscopy

Intraoperative Ultrasound Guidance

Confirmation, Localization, Stone Fragmentation, Stenosis Guidance
Preparation / Exposure
Identification of Stensen’s Duct Papilla
Punctal Dilation / Ductal Dilation
Transoral Open Sialodochotomy / Sialodochoplasty
- Distal Stones / Stenosis
- Transoral Sialendoscopy
- Middle Duct - Hilar Stones / Stenosis
- Transfacial Open Duct Surgery (+/- Sialendoscopy)
  - Impacted Stones / > 4-7mm Stones / Parenchymal stones
  - Failed Sialendoscopy
- Parotidectomy
  - Parenchymal Stones / Multiple Stones / Generalized fibrosis / Fistula
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Transoral Open Sialodochoplasty / Sialodochotomy
- Transoral Sialendoscopy
  - Middle Duct - Hilar Stones / Stenosis
- Transoral Open Sialodochotomy / Sialodochoplasty
  - Distal Stones / Stenosis
- Transfacial Open Duct Surgery (+/- Sialendoscopy)
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  - Failed Sialendoscopy
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Parotid Duct Sialendoscopy Insertion

Parotid Duct Impacted Stone
Parotid Duct Sialendoscopy
Capabilities and Limitations

Findings
Sialoliths
Strictures/Stenosis
Mucous plugs
Inflammation
Nothing

Maneuvering
Semirigid
Obstructions- Mouth / Face / Teeth

Visibility
Extent: To secondary sometimes tertiary tributaries
Sometimes cloudy / bloody

Parotid Duct Proximal Stenosis
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Therapeutic Sialendoscopy
Therapeutic Sialendoscopy
Instrumentation

- Wire-Introducer-Dilator Set
- Forceps
- Wire Baskets
- Irrigation Techniques
- Stenting
- Topic Corticosteroids

(Laser Fragmentation / Balloons / Drills)
Forceps Removal
Wire Basket Removal
Wire Baskets
Recheck After Sialolith Extraction

Topical Corticosteroid Infusion
Stent Placement
Sialendoscopic Assisted Balloon Stenosis Dilation

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CONCLUSIONS

Algorithmic Approach

Patient Selection / Establish Expectations

Careful With Entry Into The Duct

Parotid Higher Risk / More Challenging Than Submandibular

Be Prepared For A Staged or Combination Approaches

Ultrasound (Intraoperative) Useful

High Efficacy Rate If All Tools Used
THANK YOU

References


1st Complex Case
Transfacial Transcatheter Recannalization of Distal Parotid Stenosis With Sialendoscopy And Ultrasound Guidance

Visit with community otolaryngologist:

- Extracted the stone under local anesthesia
  - Took 1 hour
  - Patient passed out during the operation from pain

Since the extraction procedure:
Constant pain in his mouth and face
Worsens with chewing
Physical Exam:

No facial masses
Facial nerve 100%

5mm scar in the right buccal mucosa
No expression of saliva from the right Stensen’s duct

Recommended:

Transoral right parotid duct dilation
sialodochoplasty
with sialoendoscopy
FIRST OPERATION

Aborted the procedure:
Fear injuring the facial nerve

Offered Patient:
Observation vs Botulinum toxin vs Right transfacial/transoral sialodochoplasty with stent placement vs Parotidectomy
SECOND OPERATION
Video of Transfacial Transcatheter Anterograde Sialoendoscopy
Advanced sialendoscope transorally via catheter
Retrograde into proximal ductal system
- No further sialoliths or areas of stenosis
  - Irrigated debris / purulent saliva
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POSTOPERATIVE COURSE
Discharged POD#1 - serosanguinous drainage

Planned removal of drain 4 days later
Possibility of a salivary fistula
- Did not occur

Planned removal of stent 2 weeks later

3 months after procedure – Asymptomatic/Satisfied

**Achieved Our Goals:**
- Reconstituted the parotid duct
- Relieved Symptoms
- Avoided parotidectomy
- Increased safety

**Risk Reduction**

**ULTRASOUND**
Identified the parotid duct location

**SIALENDOSCOPE**
Assesses nature of the stricture
Confirms placement of the stent catheter
Evaluate the proximal ductules for:
- Additional strictures, mucus plugs, sialoliths, and debris
- Irrigation to the ductal system
- Further treatment of obstruction

**DRAWBACKS**
Additional training and experience
Costs of the equipment/maintenance/storage

**QUESTIONS**

Botox before transfacial approach?
Parotidectomy no matter what?
Facial nerve monitoring?
Drain placement?
Duration of drain?
Duration of stent?
Extent of incision (modified facelift/ Blair)?
Transfacial Transcatheter Recannalization of Distal Parotid Stenosis With Sialendoscopy And Ultrasound Guidance

2nd Complex Case
Post-operative Recommendations:
- Augmentin 875 mg by mouth twice a day x 7 days (or, if penicillin allergic, Clindamycin 450 mg by mouth three times per day x 7 days).
- Ibuprofen 400mg by mouth every 6 hours x 3 days for pain control and to decrease inflammation.
- Increased hydration x 3 days (drink at least 1 more glass of water per meal per day)
- Regular submandibular gland massage x 3 days (for 2-3 minutes 3 times per day)
- Regular use of sialogogues x 3 days (sugar free candies as much as possible)

If Sialodochotomy performed: Soft diet for 2 days, otherwise regular diet.
Follow up with me in 1 week and 3 months for ultrasound or earlier if necessary.

Dr. Ryan will call you on the phone in 1 week.