Objectives

- Review most common pediatric salivary gland disorders
- Review other potential work-up
- Understand role of imaging in pediatric salivary gland disorders
- Review non-surgical management

Pediatric Salivary Gland Disease

- **Immune**
  - Hypogammaglobulinemia, IgG3 def, IgA def, Sjogren's
- **Genetic factors**
- **Infectious**
  - paramyxovirus, EBV, CMV, parvovirus, strep pneumo, hflu
- **Congenital ductal abnormalities**
- **Salivary gland neoplasms rare**
- **Other**
  - Sarcoid, lymphoma
Pediatric Salivary Gland Disease

- **Sialadenitis**
  - Mumps (paromyxovirus)
  - JRP (juvenile recurrent parotitis)
- **Stones**
  - Parotid
  - Submandibular

Juvenile Recurrent Parotitis (JRP)

- Recurrent parotid inflammation +/- fevers
- First episode generally between 3 and 6 years of age
- Interval between episodes mean 15 days-2 months
- Mutation in serine protease inhibitor (SPINK1)
- Elevated matrix metalloproteinases (MMP) 2 and 9

Pediatric Salivary Gland Disorders: Other Workup

- Autoimmune blood profile
- Rheumatology Consultation

Juvenile Recurrent Parotitis (JRP)

- **Histopathology**
  - Early
    - Duct ectasia
    - Lymphocytes
    - Plasma cells
  - Late
    - Periductal inflammation
    - Lymph follicles
    - Lymphatic transformation of gland parenchyma
Pediatric Salivary Gland Disorders: Role of Imaging

• Rule out neoplasm
• Examine all glands
• Identify stones

Pediatric Salivary Gland Disorders: Imaging Study of Choice

• Minimize morbidity
• Sensitivity
• Specificity

Pediatric Salivary Gland Disorders: Imaging Study of Choice

• Ultrasound
• MRI
• CT

Pediatric Salivary Gland Disorders: JRP

• Diffuse microcalcifications
Juvenile Recurrent Parotitis (JRP)

- **Historical treatment**
  - Wait until “burns-out”
  - Gland excision

- **Medical treatment**
  - Sialogogues
  - Hydration
  - Analgesics
  - Avoid antibiotics unless fevers and/or severe pain

- **Surgical treatment**
  - Sialendoscopy
    - Pale, atrophic ductal mucosa
    - Intraductal debris
  - Irrigation
    - Saline alone
    - Saline plus steroids
    - Other?
      - MMP inhibitors
      - Target-specific anti-inflammatory mediators

Schneider et al

Sialendoscopy (15) versus antibiotic tx (21)

Outcomes= inflammatory episodes, pain intensity pre and post intervention

SS differences between pre and post-tx

No ss differences between groups

Conclusions

• Rule out stone or neoplasm in unilateral disease
• Conservative treatment of JRP successful the majority of the time
• Sialendoscopy appropriate for the minority of patients with severe effects on QOL