

# Endoscopic Removal of an Odontogenic Keratocyst in the Maxillary Sinus

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# Introduction

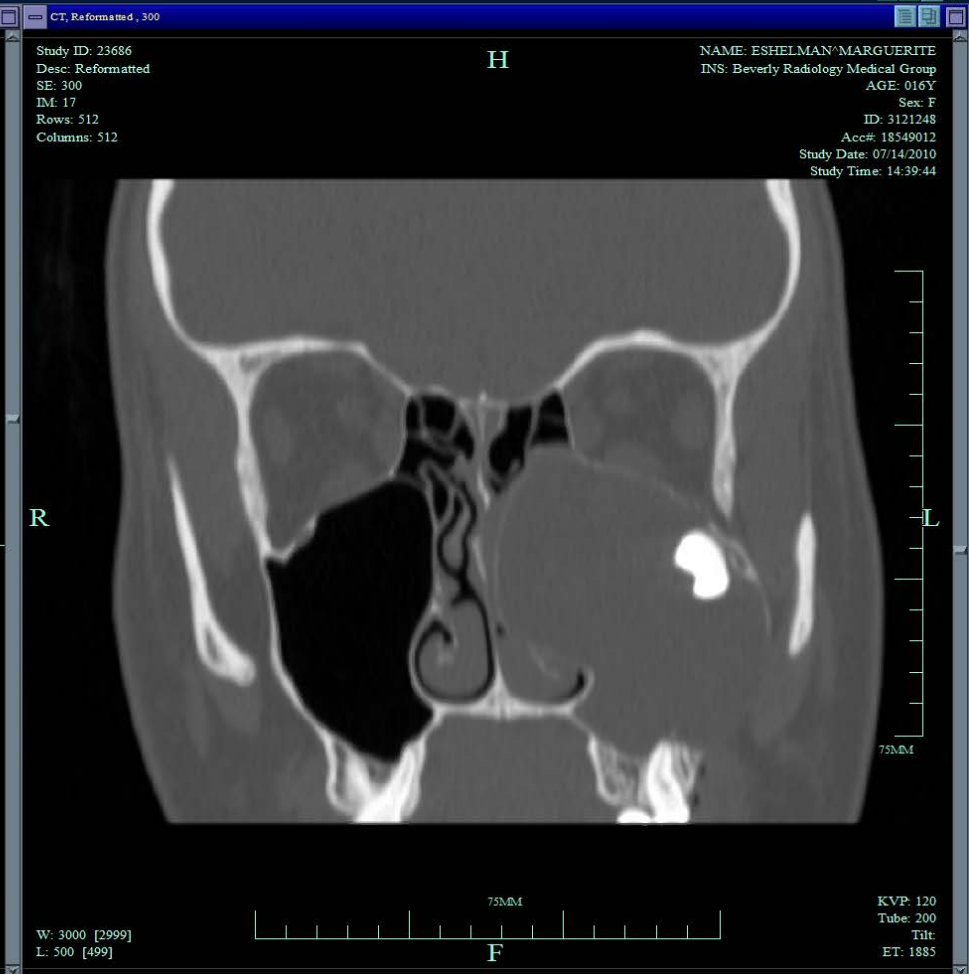
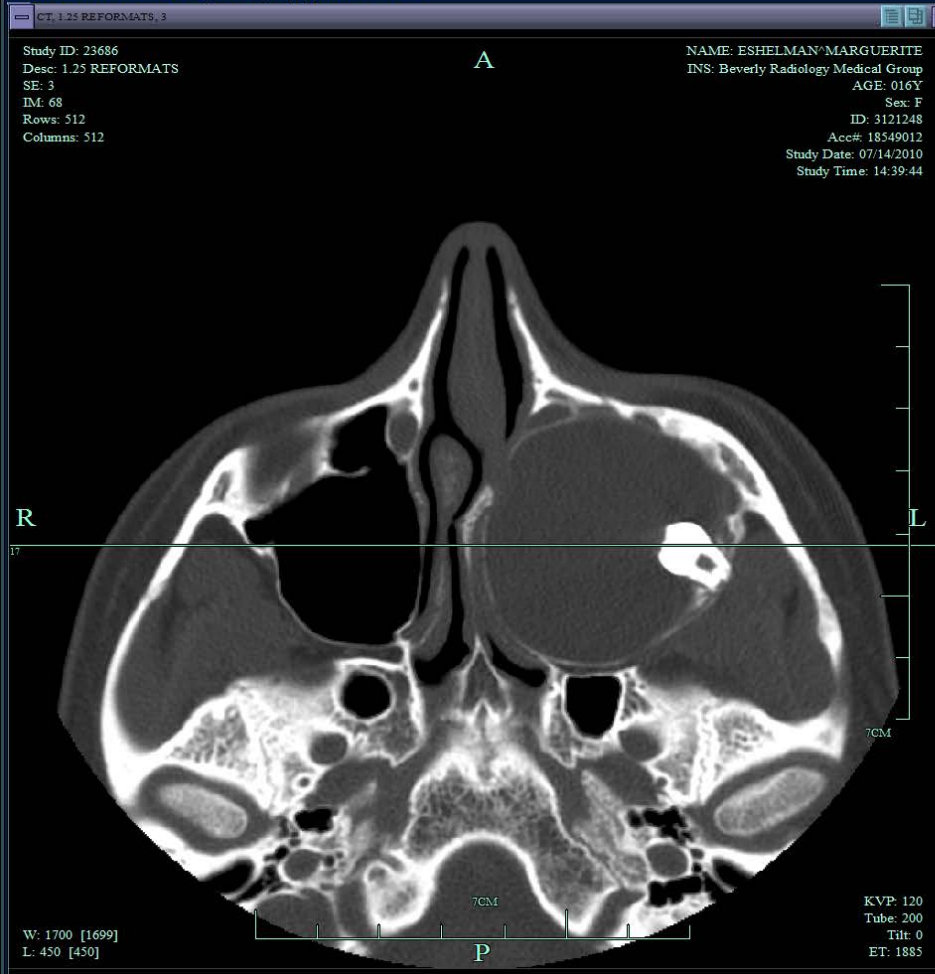
- Epithelial-lined structures derived from odontogenic epithelium
- Types of odontogenic cysts
  - Radicular cyst
  - Dentigerous cyst
  - Odontogenic keratocyst
    - Third most common
    - Aggressive behavior with high rate of recurrence
  - Primordial cyst

# Case Report

- 16-year-old female with left-sided facial swelling for 8 months
  - no rhinorrhea or nasal congestion
  - no visual complaint
  - failed multiple antibiotic courses
  - no significant PMH
  - PE notable for
    - hypertrophic L middle meatus
    - complete set of adult teeth



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# Case Report

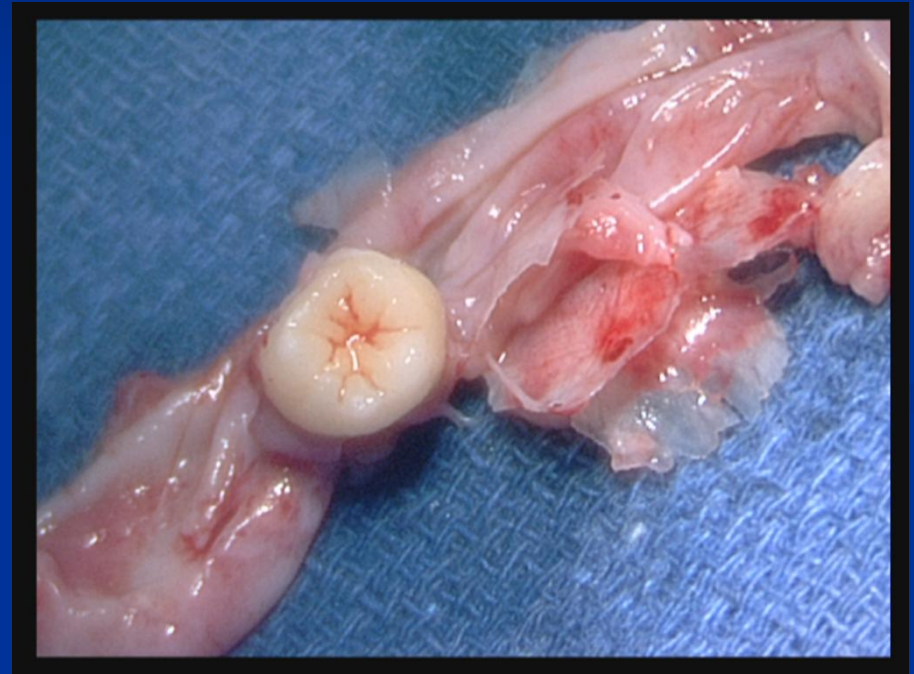
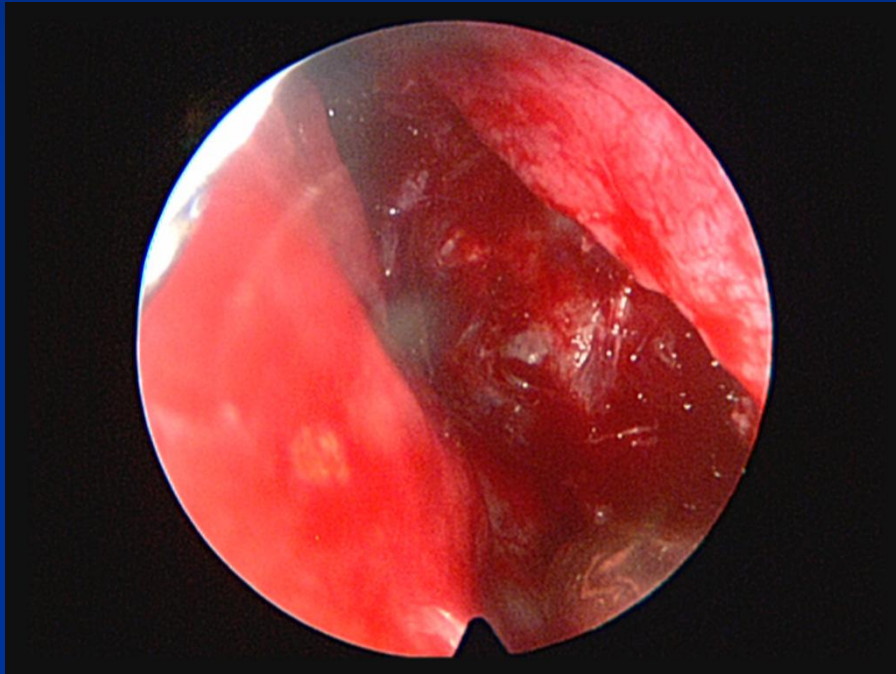
- CT findings:
  - Expansile lesion in L maxillary sinus
  - Compression of nasolacrimal duct
  - Dental structure in superior/lateral region
  - Right nasal septum deviation
  - Erosion of L osteomeatal unit

# Case Report

- Patient underwent ESS
- Intraoperative findings:
  - Sac consisting of milky yellow fluid
  - Molar tooth adherent to cystic wall
  - Thin and friable cystic wall
- Curettage of cystic wall along with extraction of molar tooth



# Case Report



# Case Report

- Pathology findings:
  - corrugated, parakeratotic squamous epithelial lining
  - Palisading pattern of basal layer
  - c/w odontogenic keratocyst



# Odontogenic Keratocyst

- Third most common odontogenic cyst (10%)
- Peak incidence between 20 - 40
- Mandible > maxilla
- Less than 1% involves sinus cavity
- 40% OKC associated with impacted teeth

# Possible etiologies

- Exact pathogenesis unknown
- Remnants of dental lamina
- Degeneration of enamel organ satellite reticulum
- Traumatic implantation or down growth of the basal cell layer of the surface epithelium
- Reduced enamel epithelium of the dental follicle

# Odontogenic Keratocyst

- Rapidly expands and destroys bone
- Up to 60% recurrence rate
- Multiple OKC associated with Nevroid Basal Cell Carcinoma Syndrome
- Malignant transformation reported but rare
- Clinically and radiographically indistinguishable from dentigerous cyst and ameloblastoma

# Differential Diagnosis

- Dentigerous cyst
  - Attachment at an acute angle to the cervical area of an unerupted tooth
- Ameloblastoma
  - Multilocular appearance
- Simple bone cyst
  - Scalloped margin
- Definitive diagnosis requires histologic analysis

# Odontogenic Keratocyst: Treatment

- Controversial
  - lesion size
  - anatomic relationship
  - association with NBCCS
- Curettage
- Enucleation
- Marsupialization followed by enucleation
- Radical Resection

# Odontogenic Keratocyst:

## Conclusion

- Third most common odontogenic cyst
- Clinically aggressive with high recurrence rate
- CT imaging of choice
- Definitive diagnosis requires histologic analysis
- Long term surveillance for recurrence

# References

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