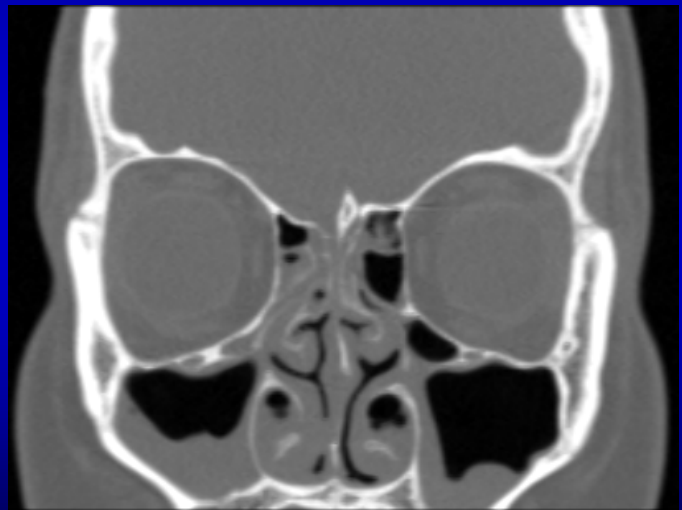




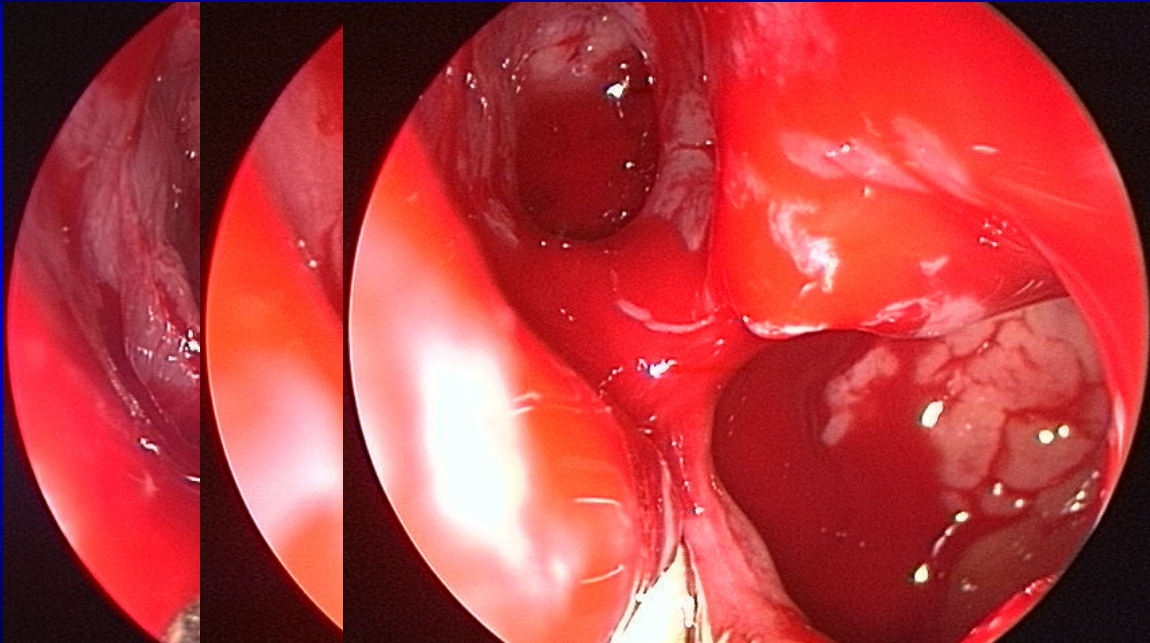
## *Paradoxical Middle Turbinates*

- Usually do not have to be addressed
- If do need to be addressed
  - ✓ Resect only the paradoxical segment





## *Incomplete uncinectomy*

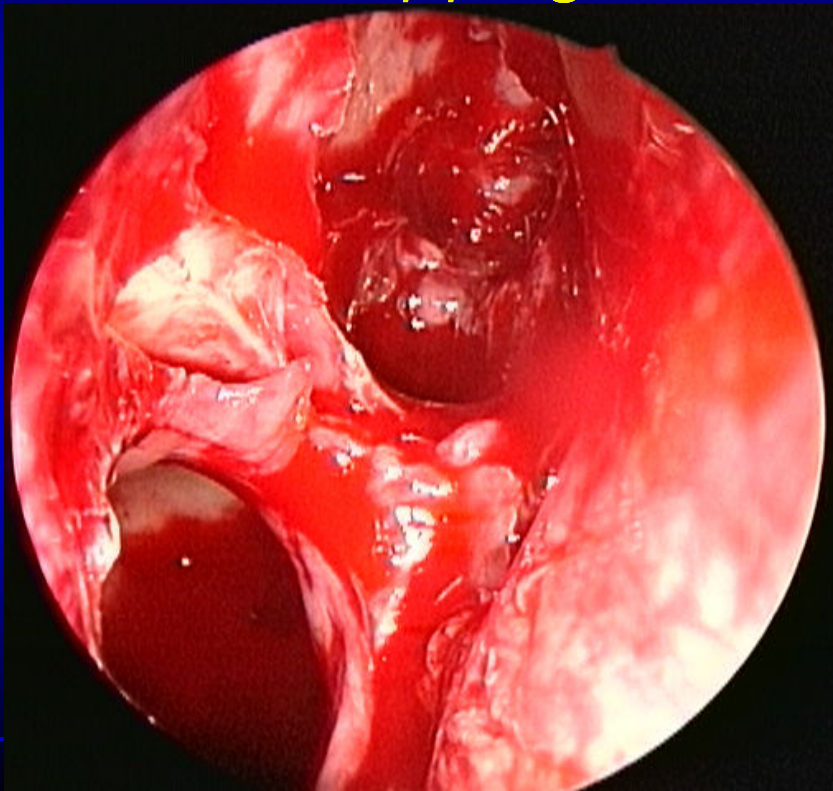


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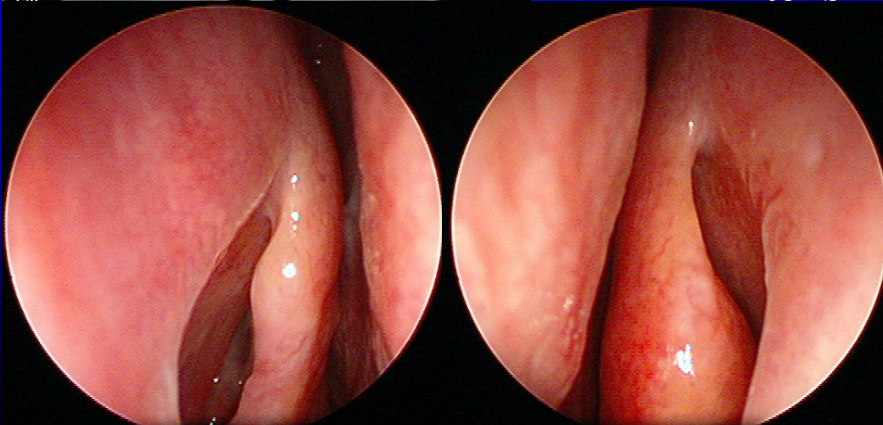
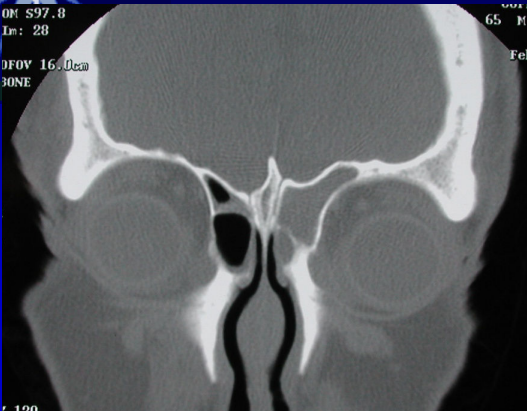
## *Avoid Mucosal Stripping*

Enter maxillary sinus with small instruments to avoid stripping mucosa off of posterior wall of sinus



## Agger Nasi

- Endoscopically appears as bulge anterior to attachment of middle turbinate
- The larger the cell the narrower the attachment angle of the middle turbinate

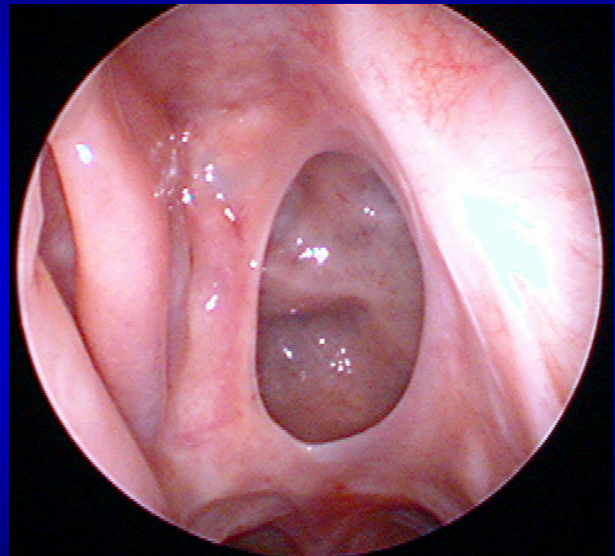




## Sphenoidotomy

### Identifying Superior Turbinate

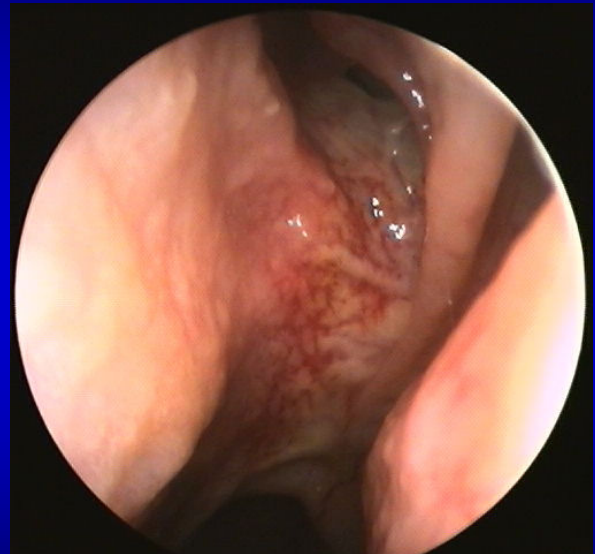
- Consistent anatomy
  - ✓ Superior and posterior to middle turbinate
  - ✓ Common attachment to skull base with MT
- Is the most reliable landmark for the natural ostium of the sphenoid sinus





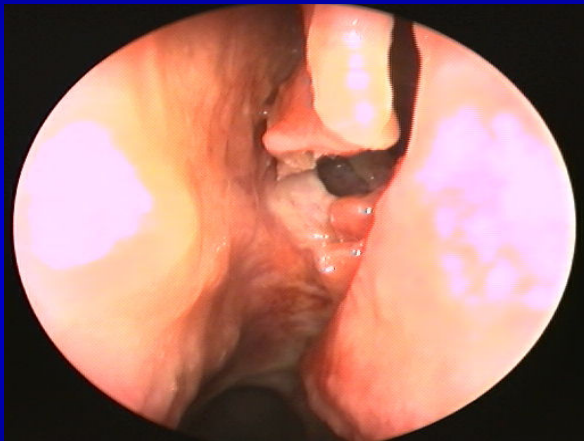
## Natural Ostium

- 2-3 mm diameter
- 1-1.5 cm above floor of sinus
- @ 7 cm at 30 degree angle from anterior nasal spine





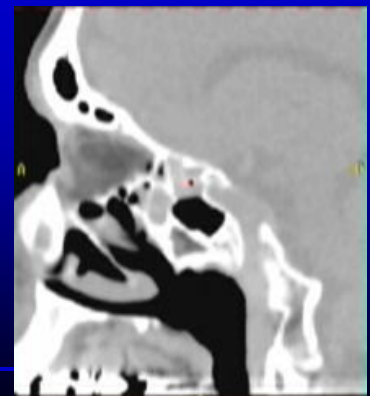
# *Trans-nasal Sphenoidotomy*



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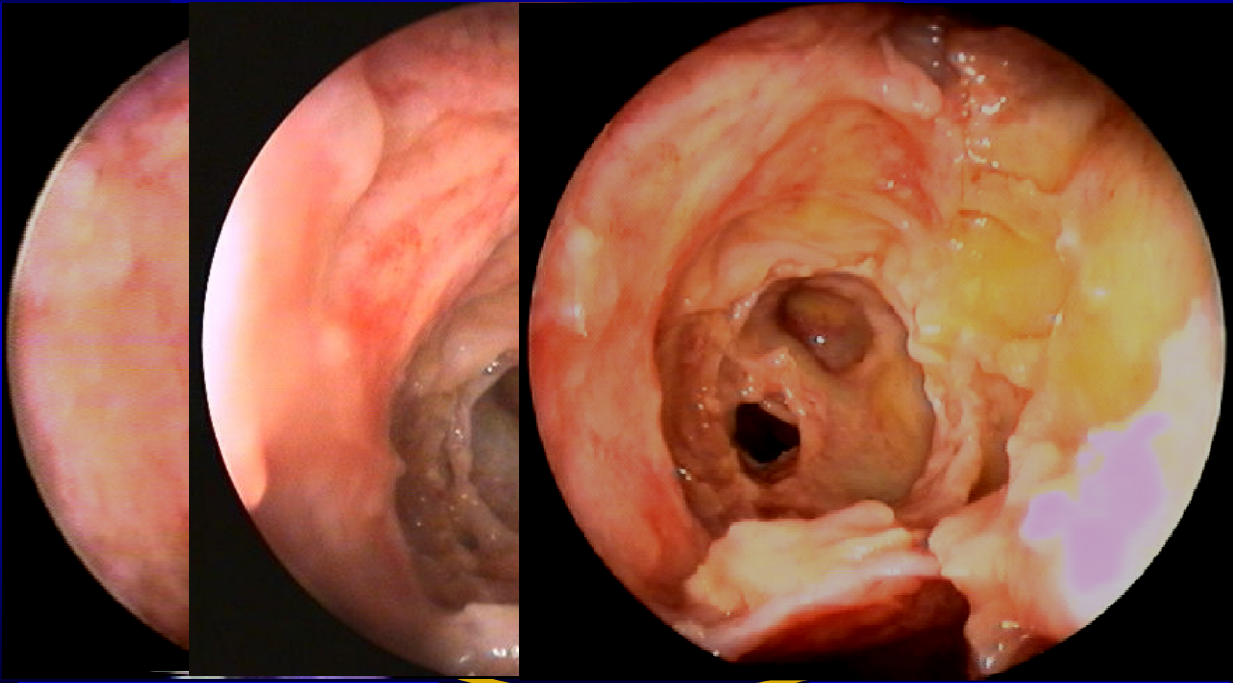
## Sphenoethmoid Cell

- posterior ethmoid cell located within sphenoid bone
- located superior and/or lateral to sphenoid sinus
- can be mistaken for sphenoid sinus



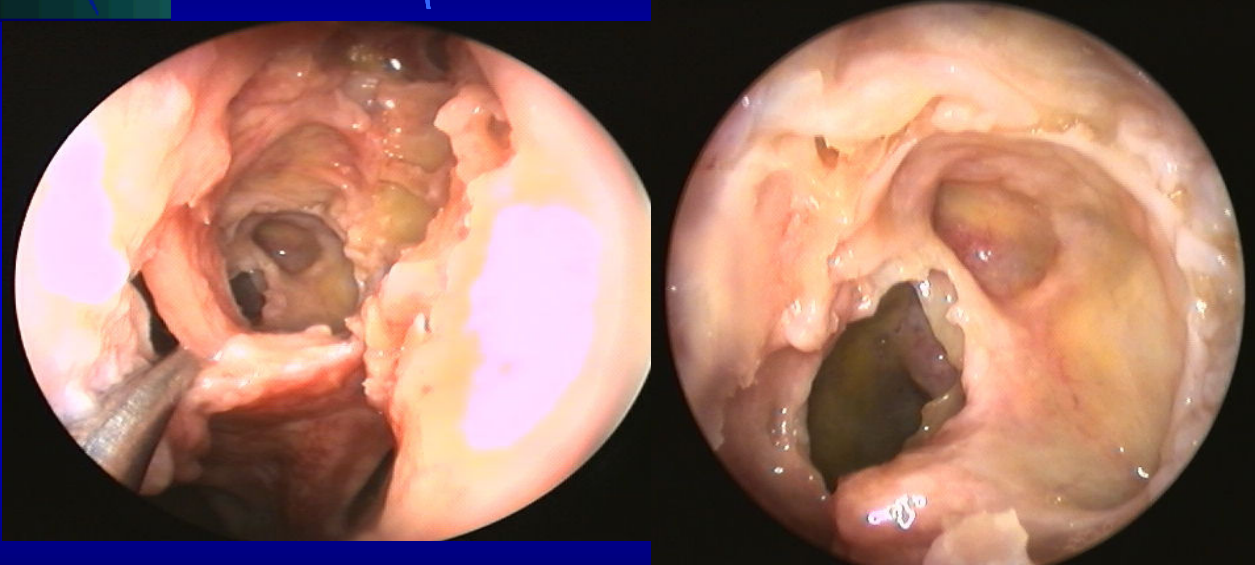


# Sphenoethmoid Cell



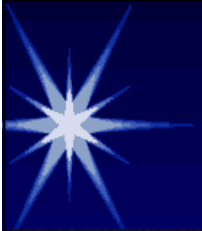


## Trans-Ethmoid Sphenoidotomy (Natural Ostium)

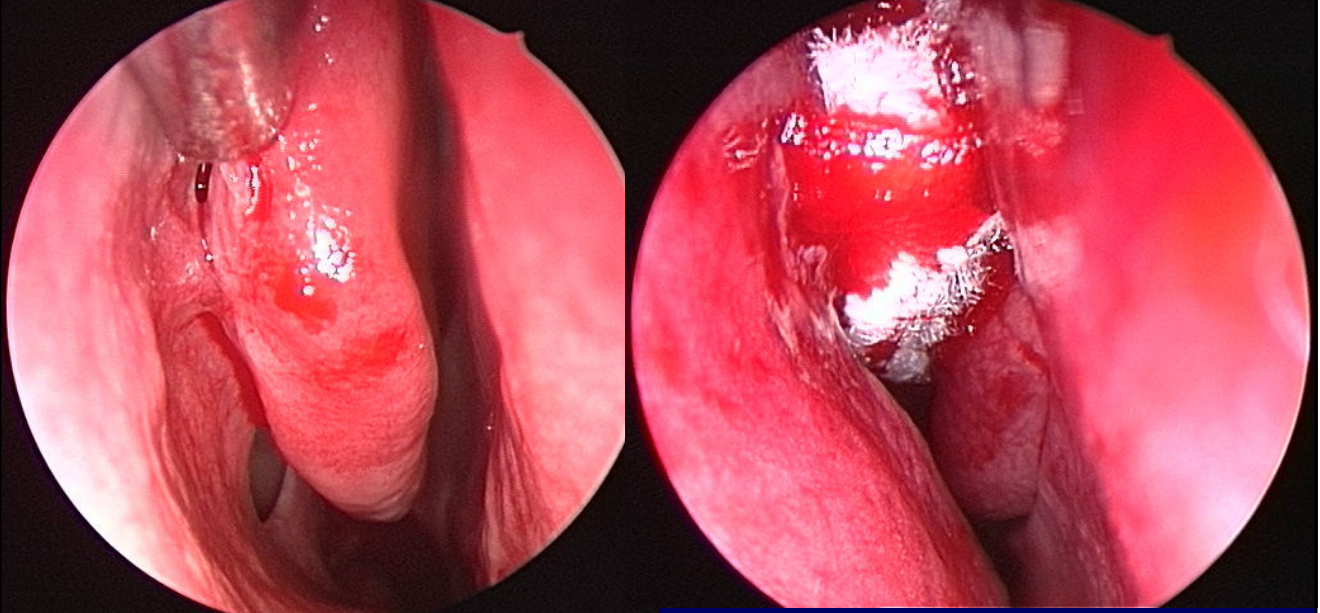


u Remove inferior part of superior turbinate to identify natural ostium

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## Post-operative care



Prevent synechiae and middle turbinate lateralization

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## *Conclusions*

- Obtain adequate access
- Tailor degree of surgery to extent of disease
- Mucosal preservation
- Minimally traumatic technique
  - ✓ Appropriate instrumentation
- Thorough postoperative care
  - ✓ Debridement, lyse synechiae