Deviated Nasal Septum

Department of ENT
KSHEMA
Mangalore
Aetiology

- Trauma
- Developmental error
- Racial
- Hereditary
Types

- Anterior
- C-shaped
- S-shaped
- Spurs
- Thickening
Clinical Features

- Nasal obstruction
- Headache
- Sinusitis
- Epistaxis
- Anosmia
- External deformity
- Middle ear infections
The septum is seen to be bent, curving away from the left side into the right nostril.
SEPTOPLASTY / SMR

- **DEF:** Septoplasty is the 
  - Restructuring
  - Remodelling
  - Repositioning of septal cartilage
  Only excess cartilage inferiorly and at the chondro-osseous junction is removed

Submucoperichondrial Resection of the quadrangular cartilage except the caudal and doral strut.
### DIFFERENCES

<table>
<thead>
<tr>
<th></th>
<th>SEPTOPLASTY</th>
<th>SMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incision</td>
<td>Freer’s</td>
<td>Killian’s</td>
</tr>
<tr>
<td></td>
<td>(Hemi Transfixion)</td>
<td></td>
</tr>
<tr>
<td>Mucoperichondrial flap</td>
<td>One side</td>
<td>Both sides</td>
</tr>
<tr>
<td>Ideal for</td>
<td>Anterior Deviation</td>
<td>Posterior</td>
</tr>
<tr>
<td>Age</td>
<td>Any age</td>
<td>Adults</td>
</tr>
<tr>
<td>Cosmetic deformity &amp; complications</td>
<td>Uncommon</td>
<td>Common</td>
</tr>
</tbody>
</table>

Can be combined with rhinoplasty
INDICATIONS

• Symptomatic Septal deviation
  – Nasal obstruction
  – Headache
  – Sinusitis
• Spur causing epistaxis
• Source of cartilage grafts
• As an approach to sphenoid sinus, Pituitary, Vidian nerve
Surgical Procedure

• Anaesthesia – Local / GA
• Position – Supine Head up position

Procedure ( Septoplasty )

Freer’s INCISION – at Mucocutaneous Junction

Elevation of Muco-perichondrial flap on one side ( anterior tunnel)

Mucoperiosteal flap on both sides ( Inferior tunnel)

Join the two – Remove excess cartilage along floor

Remove bony spur

Dislocation of chondro-vomerine junction

Elevation of Mucoperiosteum on both sides of bony septum ( posterior tunnel)

Removal of bony deviation
Septal surgery
Removed areas of bone and cartilage
Procedure - SMR

• Killian’s incision 5 mm behind Muco-cutaneous junction
• Elevation of mucoperichondrial flap on same side
• Incision on septal cartilage
• Elevation of Mucoperichondrial flap on opposite side
• Exposure of quadrangular cartilage
• Removal of quadrangular cartilage preserving a caudal & dorsal strut (approx. – 5 mm) – using ballenger’s swivel knife
• Exposure of Maxillary & palatine crests
• Gouging out with Killian’s bayonnet shaped gouge
• Removal of Bony deviation if present – vomer
• Suturing with chromic catgut & nasal packing
Killian’s incision for SMR

Freer’s incision

For Septoplasty

- Septal Cartilage
- Perpendicular Plate of the Ethmoid
- Vomer
- Maxillary Crest
- Hard Palate
COMPLICATIONS

• Septal Haematoma
• Septal Abscess
• Septal perforation
• Flapping septum
• Synaechiae

COSMETIC DEFORMITY

• Columellar retraction
• Supratip deformity
• Saddle nose

RARE COMPLICATIONS

• CSF leak
• Meningitis
Septal Haematoma

- Def: Collection of blood Sub mucoperichondrially/ periosteally

- Aetiology:
  - Post trauma/ operative
  - spontaneously in bleeding diathesis

- C/F:
  - B/L Nasal obstruction
  - Frontal headache
  - Pressure over nasal bridge
O/E:
Smooth round swelling on both sides of the septum
Dumbell shaped
Soft/ fluctuant mass
Treatment of septal haematoma

- Antero-Posterior incision Parallel to nasal floor on the side.
- If B/L: an additional incision on the opposite side in the vertical plane so as not to correspond/communicate with the other side
- Wide bore aspiration of small haematomas
- Systemic antibiotics
Complications

• Thickened Nasal Septum
• Septal Abscess
• Septal Perforation
INSTRUMENTS

• Thudicums Nasal Speculum
  – USES
    • Anterior rhinoscopy
    • Nasal packing
    • Incision during septal surgery
    • Antral lavage

• Holding the thudicums speculum
Holding the thudicums speculum
St. Claire Thomson’s Nasal speculum

- SMR
- Septoplasty
- Polypectomy
- Nasal packing
Killian’s self retaining nasal speculum
Freer’s elevator

- Elevation of Mucoperichondrium / mucoperiosteal flaps
- Can be used in ear surgeries to elevate periosteum
- Uncinectomy
Freer’s elevator
Ballenger’s swivel knife

- Excision of Quadrangular cartilage in SMR
Luc’s forceps
( Multipurpose forceps)

• Excision of Bony septum
• Nasal Polypectomy
• Biopsy
• Caldwell Luc procedure
• Holding tonsil
Luc’s forceps
Mallet & Killian’s bayonet shaped Gouge

- Excision of maxillary / Palatine crest
Tilley’s nasal dressing forceps

- Anterior nasal packing
- Foreign body removal
Septal surgeries