Meatoplasty in CWD

- Final stage of CWD
- Ensures sufficient enlargement of external auditory meatus
- Mobilizes upper part of pinna

Endaural Approach

- **Korner’s flap**
  - Endaural approach
  - Heerman B incision
  - Radial incisions in canal at 6 & 12 O clock position
  - Circumferential incision joining the two near TM
  - Divides the flap into medial tympanomeatal flap & a lateral flap which is called Korner’s flap
  - Flap is pushed posteriorly into cavity
  - Held in place by ribbon gauze in oint (BIPP)
  - Superiorly, anterosuperior flap covers attic & tegmen
  - Inferiorly tympanomeatal flap covers aditus & antrum

- **Surdille flap**
  - Circumferential incision is lateral leaving a larger TM flap & smaller lateral flap called surdille’s flap
  - Rest same as mentioned in Korner’s

- **Stacke meatoplasty**
  - Inferiorly based & consists of posterior canal skin
  - Radial incision at 12 O clock position
  - Medial circumferential incision 2-3 mm lat to TM
  - Lateral circumferential incision thru conchal skin
- **Farrior meatoplasty**
  - Strip of conchal cartilage cut
  - Flap covers entire facial ridge & inferior part of cavity
  - Creates a conchal ear canal skin flap
  - Enlarged by incorporating a subcutaneous tissue flap
  - Encourages epithelialization of cavity from posterior edge of cavity
  - Medially, medial wall of cavity covered with surdille flap raised in farrier incision

![Farrior Meatoplasty Diagram](image)

- **Fleury meatoplasty**
  - Fleury incision with superior vascular strip
  - Large surdille flap created (radial incisions at 12 O clock, lateral flap is surdille)
Covers facial ridge & lower part of the cavity
First, vertical skin is sutured → pulls upper part of pinna upwards
Conchal skin elevated → strip of conchal cartilage exposed
Conchal cartilage resected leaving perichondrium
Two incisions are made thru conchal skin & perichondrium
Folded skin is now fixed with sutures to cover remaining exposed cartilage

Post aural approaches

• Korner’s technique
  o Radial incisions at 6 & 12 O’ clock
  o Relatively medially placed circumferential incisions
  o Flap elevated & held with retractor during CWD mastoidectomy
  o 6 & 12 O’ clock incisions elongated till conchal cartilage
  o Conchal cartilage is exposed
  o 1 cm strip of cartilage is excised & separated from perichondrium
  o Flap is pulled posteriorly & sutured to subcutaneous tissue at posterior edge of cavity
  o Medially, meatal skin flaps are replaced posteriorly partly covering facial nerve, lat SCC, medial wall of attic & tegmen tympani superiorly
  o Cavity filled with gel foam in BIPP

• Stacke’s meatoplasty
  o Inferiorly based & consists of posterior canal skin & a strip of conchal cartilage
  o Radial incision at 12 O clock position
  o Medial circumferential incision 2-3 mm lat to TM
  o Lateral circumferential incision thru conchal cartilage
  o Conchal cartilage cut
- **Portman's small 3 flap meatoplasty**
  - 3 flaps → lateral, superior & inferior
  - No removal of conchal cartilage
  - For small cavities
  - Lateral circumferential incision from 12 to 6 O’clock position made 10 mm lateral to upper TM
  - Upper lateral radial incision from upper part of circumferential incision to spine of Henle
  - Similar lower incision from inferior edge of circumferential incision towards concha
  - CWD mastoidectomy
  - A finger placed thru the canal exposing lateral flap
  - Flap thinned out
  - When this is completed, edge of conchal cartilage will be visible
  - Flap is turned around the cartilage and fixed to posterior aspect of cartilage → This flap will form lateral covering of cavity → covers facial ridge
  - Ear canal skin now divided at nine O’clock position down to drum → creates a superior (covers superior part of cavity) & inferior (covers facial ridge) flap
  - These both flaps have to be thinned out

- **Portmann's large 5 flap meatoplasty with removal of cartilage**
  - Ear canal skin divided at 9 O clock position
    - Laterally at conchal cartilage
      - One incision turns infero anteriorly
      - Other incision turns superoanteriorly
Results in lateral, superior & inferior flap
- Superior & inferior flaps are further divided later
- Conchal skin of lateral flap elevated from cartilage
- Triangular piece of cartilage removed
- Similarly skin from other two conchomeatal flaps also elevated
- To facilitate mobility of these two flaps, a triangle of skin removed from their tips
- Therefore, a total of 5 flaps are created
- Flaps thinned → sutured to posterior aspect of concha with single suture
- Cavity packed with gel foam in BIPP

**Sheehy meatoplasty**
- Vertical intercartilagenous incision at 12 O’clock position running parallel to crus of helix
- An incision made at 5 O’clock position into conchal cartilage
- Horizontal incision passes backward at 9 O’clock position through conchal skin, cartilage & post auricular soft tissue
- Divides lateral skin flap into superior & inferior
- Through retro auricular approach, conchal cartilage is exposed & excised
- Superior & inferior flaps are inverted onto posterior aspect of remaining conchal cartilage
- **Fisch meatoplasty**
  - One anteroposterior incision
  - Elevates skin flap from concha before resecting major part of conchal cartilage
  - Two liberated skin flaps are inverted posteriorly around edge of concha → sutured to posterior aspect of concha

- **Landolfi’s modified Fisch technique**
  - Anteroposterior incision
  - Elevates skin flap from concha & cartilage
  - Conchal cartilage exposed
  - Using pair of scissors, conchal cartilage is resected including anterior edge of crus of helix
  - Similar procedure for inferior conchal flap
  - Resection of conchal cartilage enlarges access to cavity
  - Inverted flap of conchal skin provides epithelial covering of lateral wall of cavity
  - In addition, Sanna uses part of ant canal wall skin as superior flap

- **Modification of Palva flap & meatoplasty**
  - Palva flap normally is subcutis muscle flap used for cavity obliteration
  - Here modification of palva flap (i.e. obliteration) & meatoplasty are done together
  - Retroauricular incision → skin elevated → curved incision through subcutaneous tissue & periosteum to elevate large palva flap
  - Before actually elevating, another incision is made along entrance of canal from 6 to 12 O’clock through subcutaneous tissue, muscle & periosteum
  - After this incision, palva flap loses its anterior attachment to pinna → only attached superiorly & inferiorly
  - Meatoplasty performed by turning pinna backwards, making an intercartilagenous incision at 12 O’clock position & an incision through conchal cartilage at 5 O’clock position
  - Auricle is again pulled forwards and a large strip of conchal cartilage is excised
  - Korner’s flap is turned around resected concha & palva flap is elevated
  - Radial incision made at 9 O’clock position through canal, elevating an inferior & superior canal skin flap
- CWD mastoidectomy
- Modified palva flap now placed in cavity attached superoanteriorly and inferoanteriorly
- Mainly obliterates posterior part of cavity & sinodural angle

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