Secondary Intervention after Failed Initial Intervention for Primary Congenital Glaucoma

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Disclosures: None

Primary intervention for PCG
(Success)

Angle procedure

Segmental
Ab-interno
Ab-externo

Circumferential
Ab-interno
Ab-externo

Combined (Ab-interno / Ab-externo)

Filtering procedure

Penetrating

Non-penetrating

Tubes (Primary)

Prospective, 70 eyes
CTT, CTT-Ologen, CTT-MMF
Success ➔ 81%-86%

No published reports to date
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- Challenges with secondary intervention
- Ab interno procedures → corneal opacity
- Angle procedures → violation of angle by →
  - Previous angle surgery (segmental / circumferential)
  - Previous filtering surgery → block excision
- Conjunctival based procedure →
  - Extensive conjunctival scarring & adhesions & scar lines
  - Area of significant treatment-naïve conjunctiva
- Lamellar dissection-based procedures →
  - Scleral thinning (progression of disease)

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- Cornea Clarity
  - Yes
  - Gonioscopy
  - Goniodysgenesis / PAS
- Segmental / Circumferential Incised Angle Leaflets
  - Segmental
  - Circumferential
- Ab-interno Procedure
  - Circumferential
- Superior
  - Superior Quadrant Procedure
  - GDD
  - Cyclodestruction
  - Inferior Angle Procedure
  - Inferior Angle Scarring
  - 1 Quadrant
  - 2 Quadrants
- Inferior
  - Inferior Angle Procedure
  - Rigid probe - segmental
  - Circumferential
  - 1 Quadrant
  - 2 Quadrants
- Angle Procedure
  - Segmental
  - Circumferential
  - 360 successful
  - 360 failed
- Filtering Procedure
  - Combined angle-filtering procedure
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• To summarise …
  • Ab interno procedures → corneal clear
    • Segmental / Circumferential
  • Ab externo procedures → corneal opacity
    • Superior quadrant →
      • Angle procedure
      • Filtering procedure
      • Combined angle – filtering procedure
      • GDD
    • Inferior quadrant →
      • Angle procedure
  • Cyclodestruction

  Additionally …
  • Surgeon preference & skill
  • Available tools

• Cornea
  • Clarity
  • Yes
  • Gonioscopy
    • Goniodysgenesis / PAS
      • Segmental / Circumferential
      • Incised Angle Leaflets
        • Segmental
        • Circumferential

• Retrospective, 16 eyes
• MMC used subconjunctival
• Complete 360-degree catheterization → 70%
• IOP ≥ 32 (±7) mmHg → 16 (±4) mmHg
• No difference between complete & partial catheterization
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- Cornea
  - Clarity
  - No
- Ab-externo Procedure
- Conjunctival Scarring
  - Quadrants
    - Superior Quadrant Procedure
    - Combined angle-filtering procedure

Case Report
- Male, 4m
- IOP ➔ 36 mmHg ➔ 12 mmHg (2 months)

Prospective, 33 eyes (82% → PCG)
AGV Vs AGV-Ologen
Success rates (2 yrs) ➔ 63% (AGV), 77% (AGV-Ologen)

Complications ➔ 37%

Retrospective, 68 eyes
Success rates ➔ 62% (1 yr), 49% (2 yr), 37% (3 yr), 32% (5 yr)

Prospective, 33 eyes (82% → PCG)
AGV Vs AGV-Ologen
Success rates (2 yrs) ➔ 63% (AGV), 77% (AGV-Ologen)
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• Take Home Message

• Look for ➔
  • Corneal clarity
  • Conjunctival scarring

• Consider ➔
  • Angle-based procedures
  • Combined angle-filtering procedures
  • Glaucoma drainage devices
  • Cyclodestruction

Thank You

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