The Learning Curve: DMEK Pearls

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- I have no relevant financial disclosures

Patient Selection
**DMEK: Patient Selection**

- Fuchs Dystrophy
- Early Pseudophakic Bullous Keratopathy
- PBK with premium lens
- Large Descemet's detachment/trauma
- Healthy (may need repeat procedure)

**DMEK: Patients to avoid:**

- Large iris defects
- ACIOLs
- PPV
- Tubes/Trabs +/-
- Vitreous prolapse
- Poor visualization
- Unwillingness to return to the OR

**DMEK: Surgical Technique**
Phakic DMEK

- 72 y/o female with Fuchs Dystrophy
- CE/PCIOL OS--corneal edema--DSAEK OS
- +1.00-1.00x50 20/30+
- Cataract OD
  - BCVA 20/80
  - pachy 753 microns
  - 3+ NS; RAM 20/40
  - no corneal bullae; trace descemet's folds

Surgical Plan:
Phakic DMEK
Post-DMEK: Corneal Topography

Plan:
CE/PCIL
SN6AT4

BCVA 20/20
plano-0.50x95

DMEK: Intraoperative Challenges
Background

- Influence of graft adhesion on descemetorhexis size
  - Group A: 10mm (1mm bare stroma)
    - graft detachment: 33.3%
    - rebubbling rate: 6.7%
  - Group B: 6mm (1mm overlapping Descemet's)
    - graft detachment: 78.3%
    - rebubbling rate: 30.4%

Pearls: Recipient Preparation

- Descemetorhexis with 1mm clear zone of bare stroma is ideal
- Stain with trypan blue post-descemetorhexis if unsure
- Consider laser peripheral iridotomy to avoid intraoperative hemorrhage
Loading Modified Jones Tube

DMEK: Insertion and Unfolding
Pearls: Insertion and Unfolding

- Practice with peripheral punch (Terry/Straiko)
- Rotate modified jones tube for double barrel configuration prior to insertion
- Shallow chamber during insertion and unfolding
- Careful when shallowing from main incision

Summary

- Descemotorhexis larger than donor graft by 0.5mm
- Shallow chamber on insertion and unfolding
- Consider 20% SF6 vs air especially in combined cases
- Rebubble early