Getting started with Toric IOLs

Orbis Global Live Stream

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Learning Objectives

- To review the Introductory Basics of implementing Toric IOL’s with Low cost equipment
- Identify proper:
  - Patient selection
  - Astigmatism measurement
  - Surgical planning
  - Pre operative Toric IOL alignment marking
  - Live surgery demonstrating proper Toric IOL placement
Patient Selection
Patient Selection

- Patient who desires reduced dependence on glasses or CTL
- Recommend starting with 1.0 - 1.5D of astigmatism
- Regular astigmatism on Topography
- Avoid cases with possible zonular weakness, trauma, complications.
- Intact capsular bag is needed
Measuring Astigmatism
Measuring Astigmatism

- Manual keratometry, autorefractor, biometer keratometry, Topography

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**Action**
- Sphere: -1.75
- Cylinder: +3.25
- Axis: 180
Surgical Planning
Surgical Planning
On Line Toric Calculators

- [https://ascrs.org/tools/barrett-toric-calculator](https://ascrs.org/tools/barrett-toric-calculator)
Toric Axis Marking
Methods for Pre Operative Toric Axis Marking

• Purpose: Pre operative marking due to Cyclotorsion of the eye in supine position.
• Slit lamp (marking pen, anterior stromal puncture, Limbal marking)
• Free hand (with or without use of toricam app)
• Hand held toric marker
• Digital marking
Pre op Axis Marking at Slit Lamp
Toric Markers
IntraOperative Toric Placement
Mendez Ring for Intraoperative toric alignment

- Mendez Ring
Intra Operative Pearls

- Aim for 5mm CCC so that the anterior capsule covers the optic edge
- Remove viscoelastic from behind the IOL
- Abort Toric plan if complications arise:
  - Do not place toric IOL in the sulcus or a compromised capsular bag
PostOperative Evaluation

- astigmatismfix.com

Toric Results Analyzer

The Toric Results Analyzer was developed by John Berdahl MD and David Hardten MD to help determine if a previously placed Toric IOL is ideally aligned. By comparing the current location of the Toric IOL to a patient’s current manifest refraction, the Toric Results Analyzer can determine if rotating the Toric IOL would decrease residual astigmatism. The Toric Results Analyzer can help determine the amount of IOL rotation, and the expected residual refraction.

Berdahl & Hardten Toric IOL Calculator
Patient Presentation

- 69yo Female with visually significant cataracts OU.
- BCVA OD: -5.00 +1.25 x 94  20/50  OS: -5.25 +1.25 x 115  20/50
- IOP 18 OU, 3+ NSC OU. No other ocular pathology
- Keratometry OD: 42.00/ 43.30 @ 98  OS: 41.71/ 43.06@ 115
Summary

- On line Toric Calculator: https://ascrs.org/tools/barrett-toric-calculator
- Toricam app for axis alignment
- Post op residual astigmatism: https://www.astigmatismfix.com