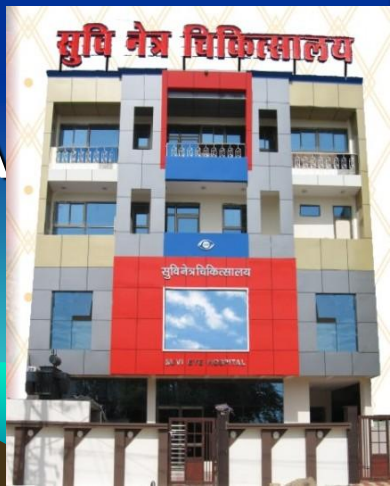
Visual Outcomes of Diffractive Multifocal Toric IOL

Dr. Suresh K Pandey,
MS (Ophthalmology, PGIMER)
Anterior Segment Fellowship (USA)

Dr. Vidushi Sharma, MBBS (AIIMS),
MD (Ophthalmology, AIIMS, New Delhi),
FRCS (UK)

SuVi Eye Institute & Research Centre
TALWANDI, KOTA, RAJASTHAN, INDIA
Email- suvieye@gmail.com
www.suvieye.com



The authors have no financial interests to disclose

PURPOSE

- To evaluate visual outcome and rotational stability of a new diffractive (AMO Tecnis Toric Multifocal 1-Piece IOL ZMT) multifocal toric IOL in patients undergoing cataract surgery with corneal astigmatism
- Patients with cataract and coexistent regular Corneal Astigmatism of >1.50D
- All cases underwent topical phacoemulsification with AMO Tecnis multifocal IOL implantation

SuVi Eye Institute, Kota, India
Competent Care with Compassion

Methods

- Reference Marking: Slit Lamp
- Axis Marking: On Operation Table
- Standard topical phacoemulsification & Implantation o AMO tecnis Toric Multifocal IOL in capsular bag
- Removal of OVD beneath the capsular bag
- Alignment of AMO tecnis Toric Multifocal IOL

AMO Tecnis Multifocal Toric IOL Calculator

TECNIS® MULTIFOCAL TORIC

Surgeon and Patient Information(i)

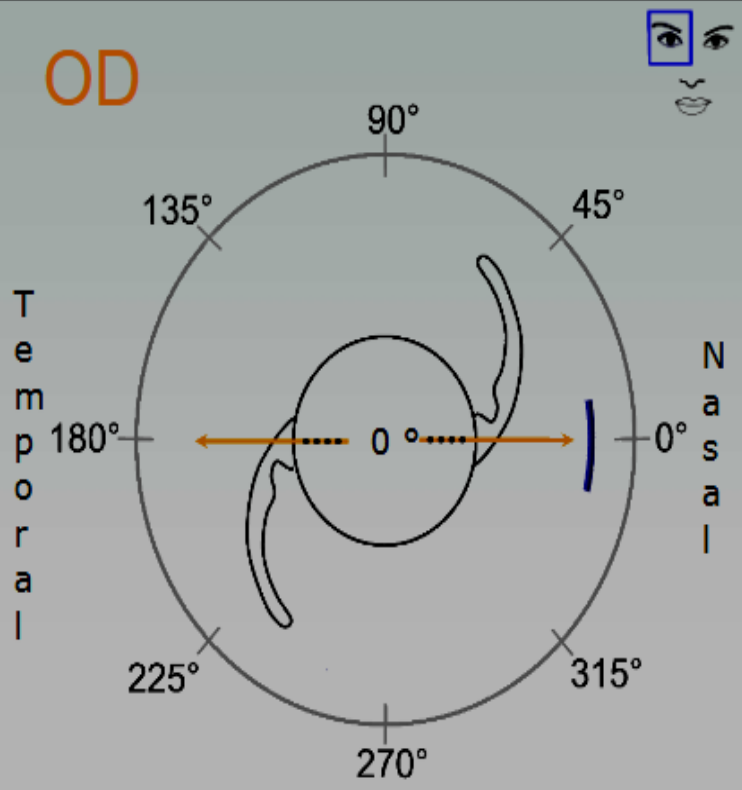
Surgeon Name	Dr Suresh K Pandey	Date	25.02.2014
Patient Information	Smt Nidhi Gupta	Patient Age	45

Eye Selection: (●) OD (Right) ( ) OS (Left)

K Notation: (●) D ( ) mm

Keratometry(i)

Surgically Induced Astigmatism (SIA)	0,25 D	@ Axis (Incision Location)	0 °
Flat K1	44,00 D	Flat K1 @ Axis	90 °
Steep K2	45,75 D	Steep K2 @ Axis	0 °
Preop Corneal Astigmatism	1,75 D		



Biometry(i)

Axial Length: 23,28 mm

Method: Ultrasound

A-constant: 118,80

Calculation Preferences(i)

SE IOL power: 21,0 D

K Index: 1,3375

Refractive Cylinder Convention: (●) Plus ( ) Minus

Final Results (i)

IOL Details		Residual Astigmatism	
IOL Model	Orientation	Cylinder	Axis
( ) ZMT150	0 °	+0,48 D	0 °
(●) ZMT225	0 °	+0,03 D	90 °
( ) ZMT300	0 °	+0,54 D	90 °

Calculate Results | Clear Entries | Print Results | Order Selected Lens

V: 1.2 CE

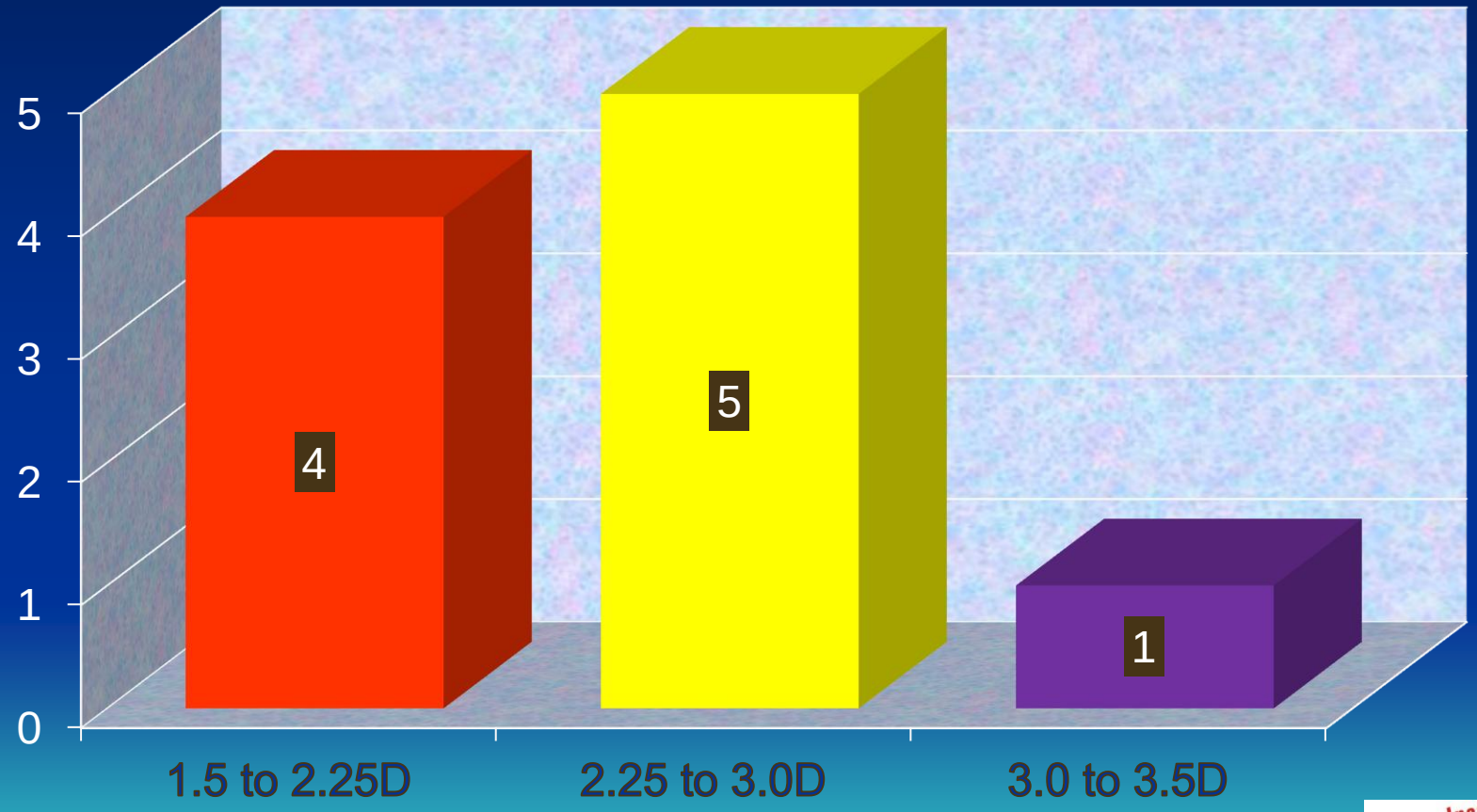
Methods

- Visual acuity (distance, Refraction and IOL rotation checked at 1st postop day, 2 weeks, 6 weeks and 3 months
- IOL rotation evaluated using the incision placed at steep axis as a reference

RESULTS

- The study included 10 eyes (10 patients).
- SE refraction within ± 0.50 D of the attempted spherical correction was achieved in 9 eyes (90%).
- Mean toric IOL axis rotation was 3.24 ± 1.33 degrees (measured with a standard axis marker from the centre of the incision)

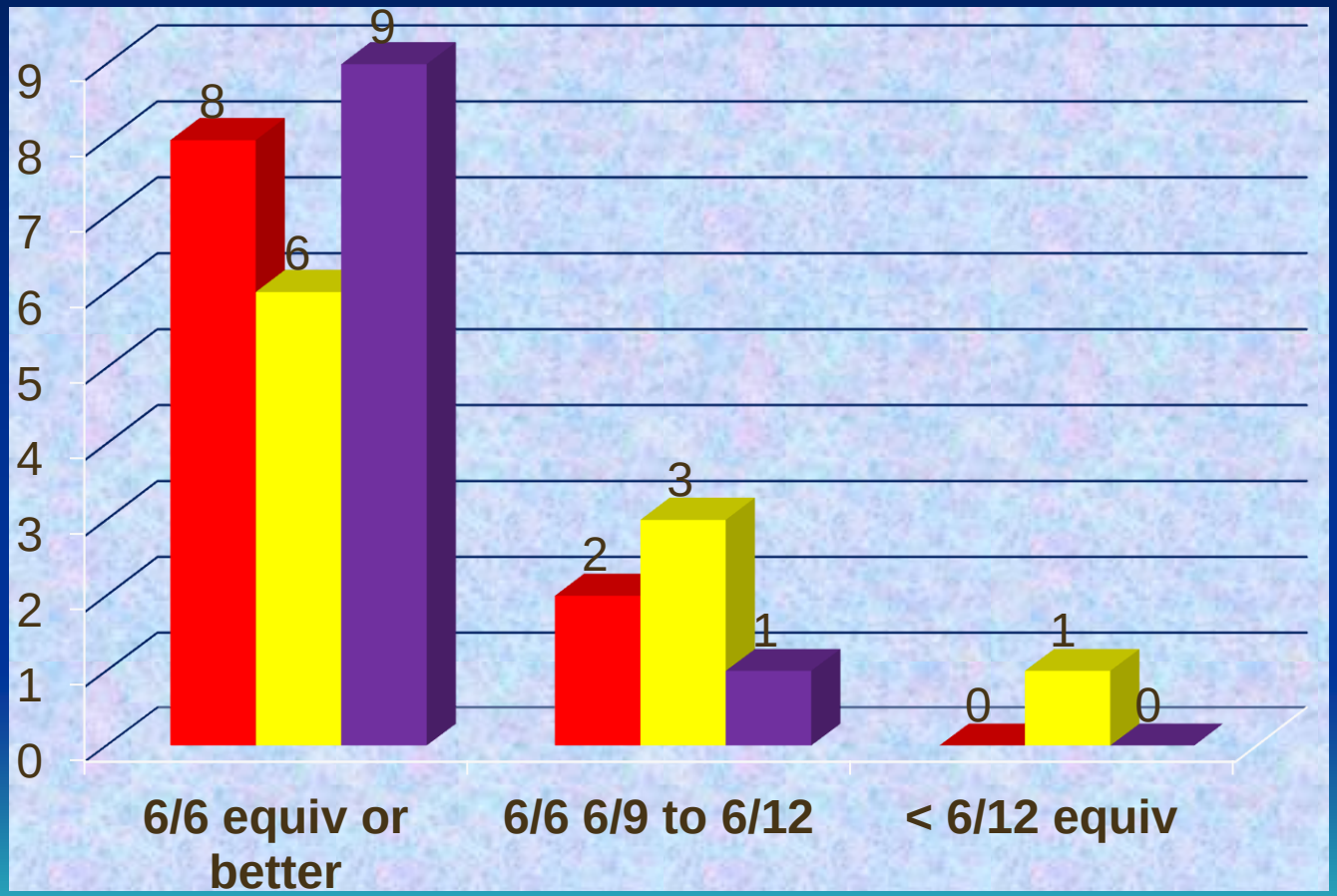
PREOP CYLINDER (N=10)



Dr Suresh Pandey,
SuVi Eye Institute, Kota

SuVi Eye Institute, Kota, India
Competent Care with Compassion

Postop Uncorrected Visual Acuity



SuVi Eye Institute, Kota, India
Competent Care with Compassion

DISCUSSION

- In this small pilot study, AMO Tecnis toric multifocal IOL provided excellent distance, intermediate and near vision, along with correction of preoperative astigmatism
- The addition of multifocality on the trusted Tecnis platform provides excellent visual outcome with spectacle independence with the known night vision advantages of Tecnis IOLs.

DISCUSSION

- This toric multifocal IOL also has excellent rotational stability in the capsular bag
- The postoperative spherical equivalent refraction was within 0.5 D in 9 of 10 cases, even when sophisticated methods of IOL alignment had not been used.

CONCLUSION

- The recently launched AMO Tecnis toric diffractive multifocal IOL achieves spectacle independence in cases of cataract surgery with co-existent regular corneal astigmatism.