

Rotational Stability of Diffractive Multifocal Toric IOL

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BACKGROUND

- Emmetropia with increased spectacle independence is an objective of modern cataract surgery. ¹
- Postoperative astigmatism can be a major refractive problem in patients with multifocal intraocular lenses (IOLs), reducing uncorrected visual acuity. ²
- With multifocal IOLs, any astigmatism over 1.00 diopter (D) should be corrected for the best result. ²
- The implementation of multifocality and of toricity in a single IOL is a new option for cataract patients with medium to high corneal astigmatism; ² but must be considered Rotational Stability of Multifocal Toric IOL

PURPOSE

Evaluate the Rotational Stability of Diffractive Multifocal Toric intraocular lens implanted in patients with cataract and corneal astigmatism.

METHODS

- Prospective, descriptive and interventional study.
- 83 eyes of 66 patients.
- Setting: Instituto Docente de Especialidades Oftalmológicas, IDEO. Maracaibo – Venezuela.

METHODS

INCLUSION CRITERIA:

- Diagnosis of cataract and corneal astigmatism ≥ 1.25 D.

EXCLUSION CRITERIA:

- Greater ametropia to -3.00 D.
- Irregular corneal astigmatism.
- Corneal dystrophies.
- Mauopathies.
- History of retinal detachment.
- Intraocular inflammation.
- Abnormalities of the iris and / or pupillary deformity.

METHODS

ACRYSOFT IQ
ReSTOR MULTIFOCAL TORIC IOL

Alcon CE

Alcon no recibe ni guarda ningún dato de los pacientes. Por favor, imprima una copia del resultado final para sus registros. Para consultar los modelos disponibles de la IOL AcrySof® IQ ReSTOR® Multifocal Tórica, por favor póngase en contacto con su representante de Alcon. [Imprimir](#)

IQ ReSTOR® Multifocal Tórica, por favor póngase en contacto con su representante de Alcon.

Recomendación sobre la lente

Información del paciente y médico	
Nombre del Médico	MARCO RIOS
Nombre del Paciente	WILLIAM MOLERO
Información Adicional del Paciente (T.O., Caso, etc.)	2564909
Información detallada sobre la lente	
LIO AcrySof® IQ ReSTOR® Multifocal Tórica	SND1T5
Equivalente esférico (SE) de la LIO	21.0 D
Eje de colocación	90°
Potencia del cilindro (Plano de la LIO)	3.00 D
Potencia del cilindro (Plano de la córnea)	2.06 D
Información sobre el cálculo	
Astigmatismo corneal preoperatorio:	3.07 D X 90°
Astigmatismo inducido quirúrgicamente:	0.10 D X 175°
Resultado del Cilindro Cruzado (plano de la córnea):	1.97 D X 90°
Astigmatismo residual previsto:	0.09 D X 0°
Información preoperatoria	
Datos del paciente	
K plana	43.28 D
en eje plano	175°
K curva	45.35 D
en eje curvo	90°
Potencia esférica de la LIO (P-IOL)	21.0 D
Astigmatismo Inducido Quirúrgicamente (SIA)	0.10 D
Ubicación de la Incisión (IU)	95°
Notas:	

OD (Derecho)

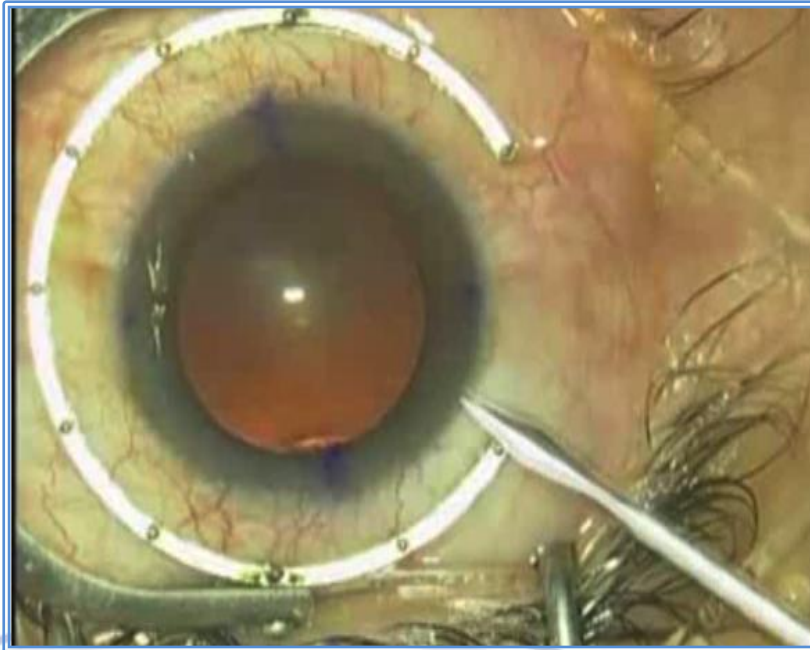
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Nuevo cálculo | Tutorial | Ayuda | Política de Privacidad y Condiciones Legales

- Biometrics: IOL Master[®] (Carl Zeiss, Germany).
- Corneal topography: Aberrometer-topographer Nidek OPD Scan II[®].
- Axis Model: AcrySof Toric IOL Calculator based on Web before surgery.
- Statistical analysis: was performed using SPSS for Windows software (version 16.0, SPSS, Inc.) and expressed as mean, standard deviation (SD), absolute numbers and percentages.

METHODS



- Surgery: a single surgeon, technical "stop and chop" through a clear corneal incision of 2 mm.
- Diffractive Multifocal Toric IOL was implanted into the capsular bag with Monarch III injector and a cartridge-D.
- Postoperative position at 6-month progression was determined with the Vega-Rios method.³

RESULTS

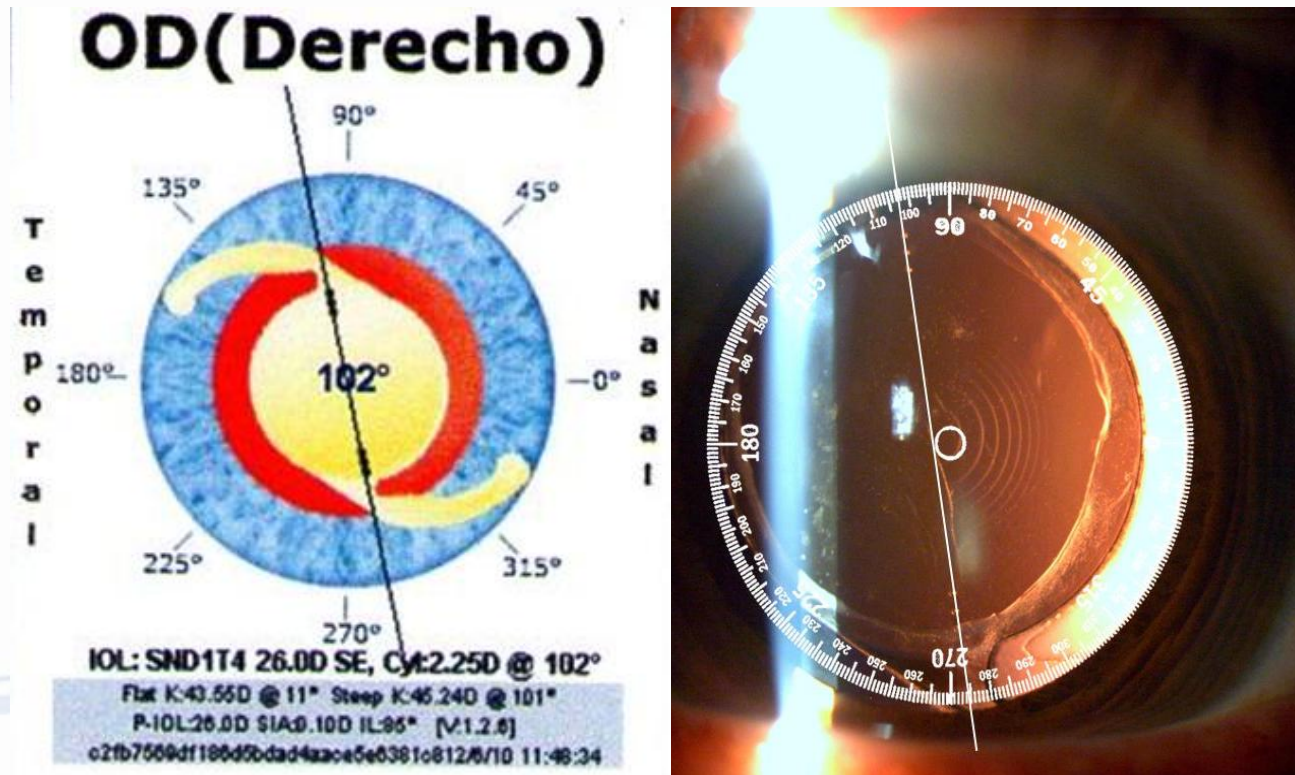


Figure 1: A (Left side): Axis placement suggested by the AcrySof Toric IOL web based calculator prior to surgery (102°). **B** (Right side): The Vega-Rios method was used on the slit lamp photograph of the same patient in order to determine the axis placement of the IOL six months after the cataract surgery (100°).

RESULTS

IOLs implanted	83
Patients	66
IOL Model	SN6ATT T2-T5
Mean rotation +/- SD	3.00 +/- 1.40
Highest rotation	10°
Follow up period	6 months

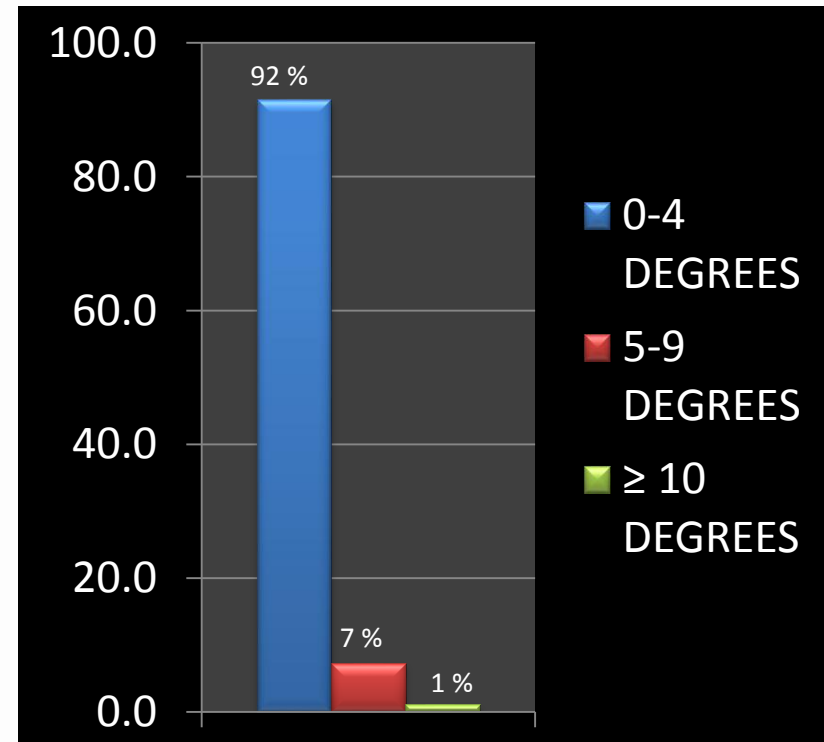


Table 1: After using this method the mean rotation of the toric IOL at the end of the follow up period was 3.0° with a highest rotation of 10°.

IOLs= Intraocular lenses.

SD= Standard deviation

CONCLUSIONS

- Diffractive Multifocal Toric IOL showed rotational stability when implanted in the capsular bag.
- Further research is needed with a larger sample, multiple measurement methods and long-term monitoring.

REFERENCES:


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