



ESCRS

EUROPEAN SOCIETY OF CATARACT & REFRACTIVE SURGEONS

Home	About Us	Publications	Congresses	Membership	On Demand	ESCRS Activities	ESONT
Amsterdam 2013	Programme	Satellite Meetings	Registration	Exhibition	Virtual Exhibition	Hotels	

[Visa Letter Invitation](#)



Search Abstracts by author or title
(Search results will display both Free Papers & Poster)

[Back to Freepaper Session](#)

Femtosecond-laser arcuate keratotomy for correcting astigmatism in pseudophakic patients

Session Details

Session Title: Femto-cataract

Session Date/Time: Monday 07/10/2013 | 08:00-10:00

Paper Time: 09:34

Venue: Forum (Ground Floor)

First Author: : C.Lindemann *GERMANY*

Co Author(s): : P. Hoffmann

Abstract Details

Purpose:

To evaluate predictability and safety of fs-Laser arcuate keratotomy at the time of cataract surgery and to develop a dose-response relationship.

Setting:

Private eye clinic in Germany

Methods:

50 eyes were evaluated in an ongoing prospective trial. All eyes had corneal astigmatism of 1.00 to 1.99 dpt and a vision-impairing cataract. For dosage, the vector mean of Lenstar keratometry and TMS5/Okulix tomography (including posterior corneal curvature) was chosen as this yielded the best results in toric IOL implantation. Using the Technolas Victus laser platform, capsulotomy, nucleus fragmentation and arcuate incisions were performed. The main incision was done manually as a post-limbal/scleral incision to minimize induced aberrations. The laser keratotomies were spread open with a conic hook. Postoperatively, the result was evaluated by manifest refraction, keratometry, topography and wavefront aberrometry.

Results:

Mean target astigmatism was 1.33 ± 0.38 dpt. Optical zone was 8.5mm in all cases, centred on the presumed line of sight. Mean length of the incisions was $42.8 \pm 8.5^\circ$, mean depth 501 μm . Mean postop cylinder was 0.58 ± 0.50 (manifest refraction), 0.65 ± 0.30 (keratometry) and 0.72 ± 0.49 (topography). Mean induced cylinder change was 1.04 dpt equivalent to a correction index of 0.78. 83% of eyes had > 0.75 dpt of refractive cylinder remaining. The amount of HOA is comparable to pseudophakic patients without AK (0.13 vs. 0.11 $\mu\text{m RMS}$). Details of the new nomogram will be presented.

Conclusions:

Femtosecond laser arcuate keratotomy is a safe, easy and predictable way of correcting low to moderate corneal astigmatism at the time of cataract surgery. It is much more predictable than manual LRI and may challenge the use toric IOL in eyes with < 2 dpt of corneal astigmatism. As with toric IOL, planning and calculating the correction of low power cylinders is not trivial.

[MAIN AMSTERDAM SITE](#)

[CONGRESS HIGHLIGHTS](#)

[GENERAL INFORMATION](#)

[PROGRAMME OVERVIEW](#)

[ONLINE EVALUATION](#)

NEW FEMTO CATARACT

[TRAINING COURSES](#)

[NEW INTERACTIVE SESSIONS](#)

NEW NIOIC/ESCRS VIDEO SYMPOSIUM
[OF SURGICAL COMPLICATIONS](#)

[INSTRUCTIONAL COURSES](#)

NEW VIDEO SYMPOSIUM ON
[CHALLENGING CASES](#)

NEW INTERACTIVE POSTER SESSION

[REVIEW ABSTRACTS](#)

[OPENING CEREMONY &](#)
[BINKHORST MEDAL LECTURE](#)

[MAIN SYMPOSIA](#)

NEW FREE PAPER SESSIONS &
[ABSTRACTS](#)

- [Saturday Free Papers](#)

- [Sunday Free Papers](#)

- [Monday Free Papers](#)

- [Tuesday Free Papers](#)

- [Wednesday Free Papers](#)

NEW Poster Abstracts

[CLINICAL RESEARCH SYMPOSIA](#)

[REFRACTIVE SURGERY DIDACTIC](#)
[COURSE](#)

[YOUNG OPHTHALMOLOGISTS](#)
[PROGRAMME](#)

[YOUNG OPHTHALMOLOGISTS SESSION](#)

[WORKSHOP ON VISUAL OPTICS](#)

[PRACTICE DEVELOPMENT PROGRAMME](#)

[JCRS SYMPOSIUM](#)

CSCRS SYMPOSIUM

SURGICAL VIDEO SYMPOSIUM

ISRS SYMPOSIUM

SURGICAL SKILLS TRAINING COURSES

SURGICAL SKILLS COURSE SCHEDULE

EBO & ACCREDITED COURSES

JOHN HENAHAN PRIZE

Financial Interest:

NONE