

**Eye Department “G. Moscati” Hospital
Taranto (Ta) – ITALY
Head of Dpt. G. Addabbo, MD.**

***“Correlation between IOL positioning and contrast sensitivity after
implantation of a new apherical IOLs”***

G. Addabbo MD.

Authors have not financial interest with products and companies cited in this presentation

XXVII Congress of the ESCRS
12 -16 September 2009
Barcelona, Spain



PURPOSE

Evaluation of effectiveness on quality of vision of a new Aspherical IOL (AM60) with optimized asphericity, after cataract surgery. The postop IOL positioning into the bag has been evaluated at different time frames to correlate the efficacy and stability of the IOL's prolate profile with respect of the axial length

AM60 – Ligi Technologie Medicali

The Technology: Incorporating the fundamental learning of Cipta® customized refractive surgeries, the patent pending AS60/AM60 IOLs utilizes new ASPHERICITY OPTIMIZED™ optics to enhance patient visual performance. Asphericity Optimized designs have been developed from a detailed analysis of the eye's refractive surfaces and the practical considerations of IOL, in-the-bag, lens placement

Specs:

Over all \varnothing : 11,0mm (10D..15D), 10,7mm (15.5D..22D), 10,5mm (22.5D..30D)

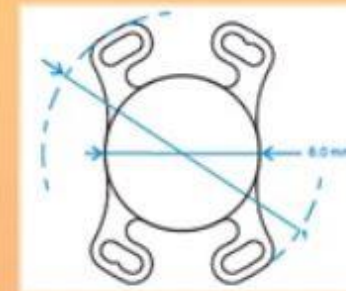
Optic \varnothing : 6,0 mm

A Cost: 118,0

Loop: angle 0°

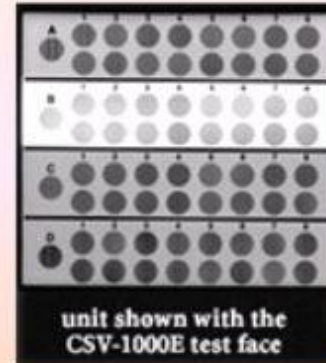
Material: Hydrophilic acrylic with UV – absorber

Edge type: Round anterior -Square posterior.



Material and Methods - Population

60 eyes of 60 patients underwent to cataract surgery and single piece aspheric IOL (AM60 LIGI) was implanted. UCVA, BCVA, contrast-sensitivity (CSV-1000, VectorVision), axial length (IOLMaster, Zeiss); dynamic pupillary assessment in photopic and scotopic conditions (pMetrics LIGI); data were collected at 2 weeks, 1 and 6 month. None of the patients suffered any ocular disease or had pre-op corneal astigmatism greater than 2,5D. The implanted IOL-power values ranged between 16D and 26D.



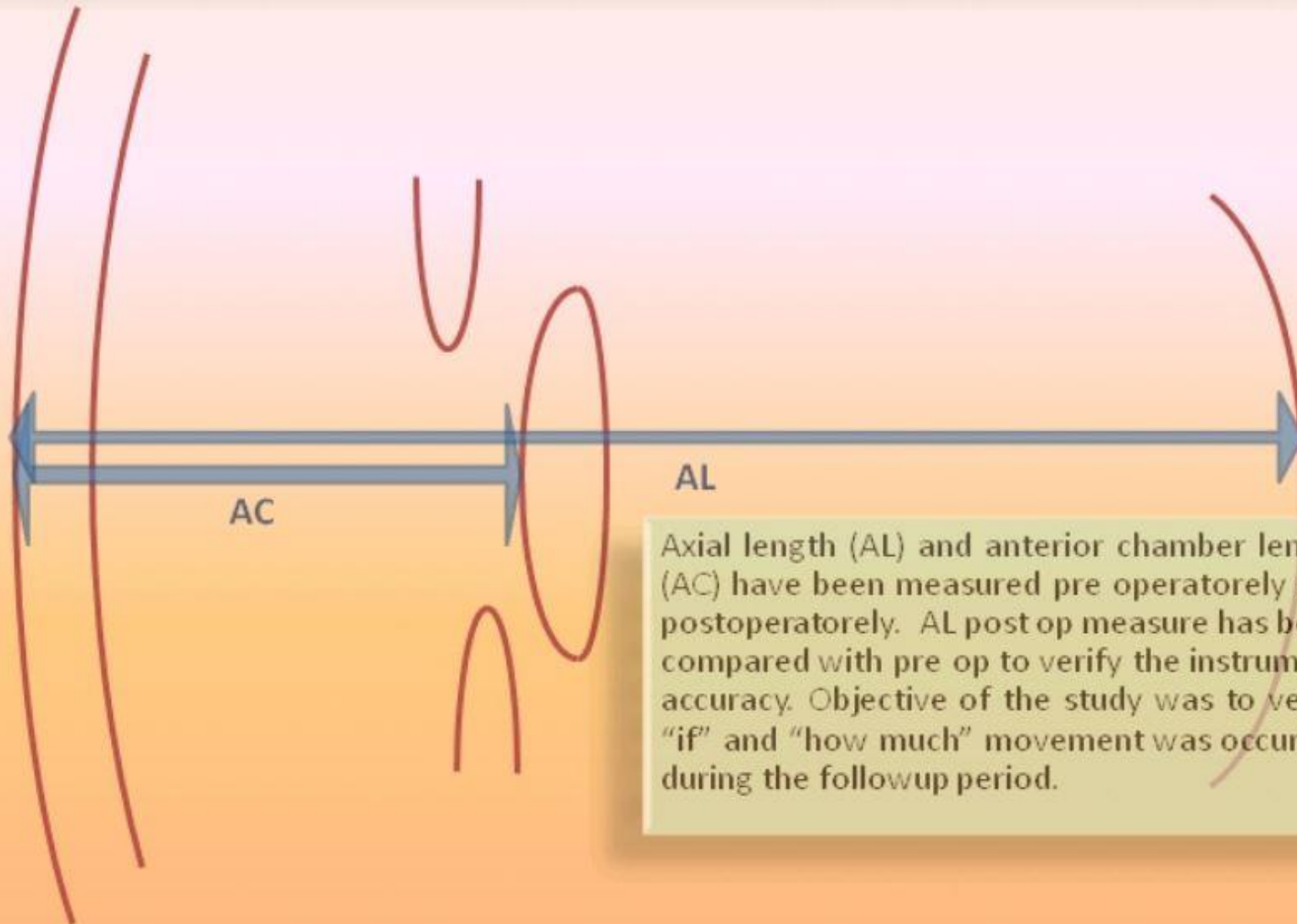
Inclusion Criteria:

- No ocular disease
- Senile cataract
- Willingness to participate in a 6 month study

Exclusion Criteria

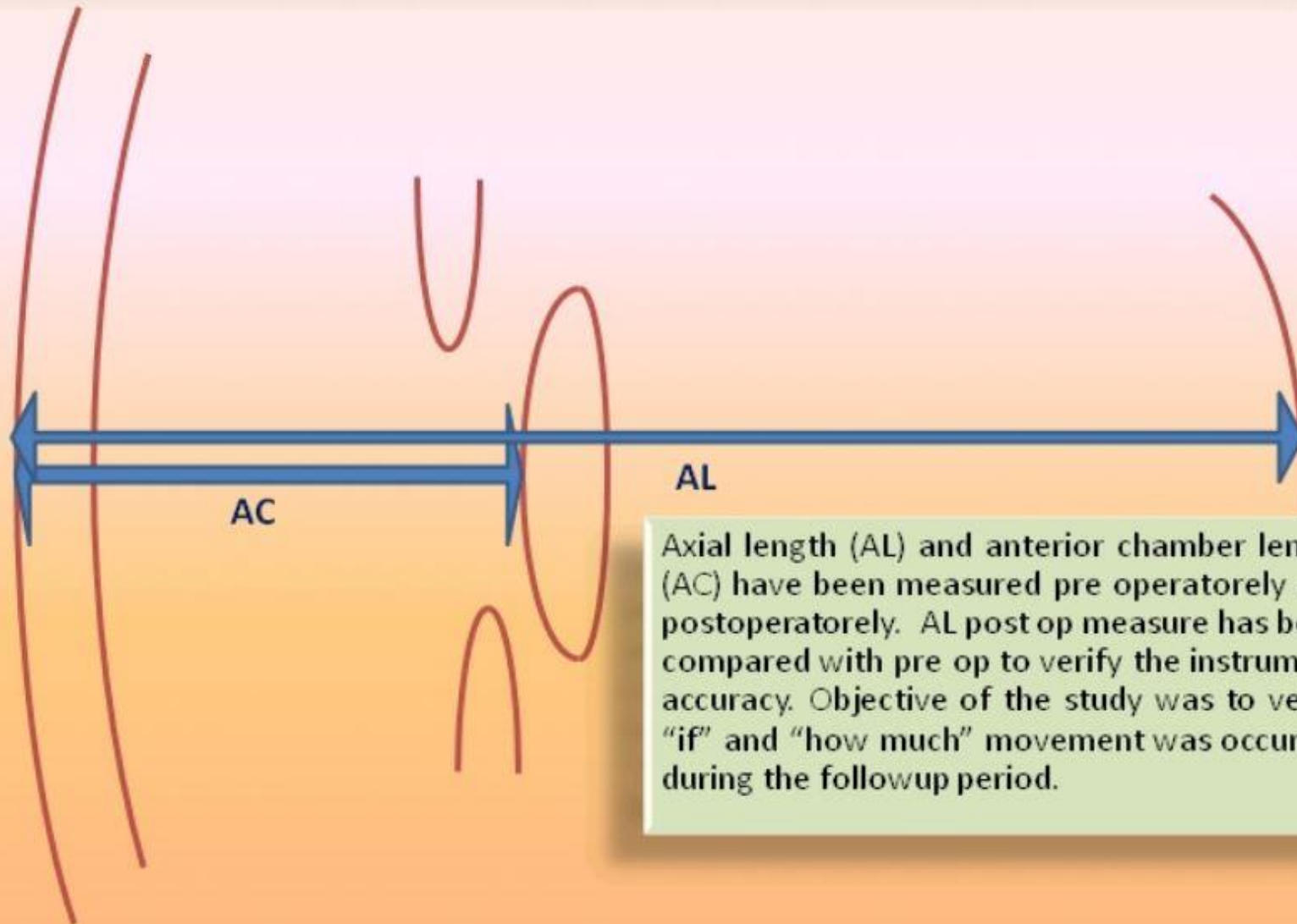
- Any ocular disease
- Pre-op corneal astigmatism $\geq 2,5D$
- Ocular Trauma
- Systemic Steroid or immunosuppressive therapy
- Diabetes even if without retinopathy

IOL Positioning Evaluation



Axial length (AL) and anterior chamber length (AC) have been measured pre operatorely and postoperatorely. AL post op measure has been compared with pre op to verify the instrument accuracy. Objective of the study was to verify "if" and "how much" movement was occurred during the followup period.

IOL Positioning Evaluation



Axial length (AL) and anterior chamber length (AC) have been measured pre operatorely and postoperatorely. AL post op measure has been compared with pre op to verify the instrument accuracy. Objective of the study was to verify "if" and "how much" movement was occurred during the followup period.

RESULTS

UCVA and BCVA were stable after 6 months despite a moderate displacement of the optics with respect to the visual axis direction. Contrast sensitivity was stable vs time for all frequencies in 65% of patients, better in low frequencies for 35% of patients where a rear displacement was measured. All IOLs were right positioned and PCO were not reported.

| | UCVA | BSCVA | SE (D) |
|------------|-----------------|----------------|-----------------|
| AM60, LIGI | 0.65 ± 0.33 | 0.82 ± 0.2 | -0.2 ± 0.53 |

CONCLUSION

The optimized asphericity of AM60 IOL effectively enhances the quality of vision and the effectiveness of the optimized asphericity has been showed by the independence of quality of vision by from the possible error in measuring and/or mispositioning of the IOL into the bag.

GRAZIE