

Experience with the M2 Single Use

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Purpose

- ◆ To study the reproducibility of the flap thickness with M2 Single Use 130 and 90
- ◆ To evaluate the complication rate during the operation and postoperatively
- ◆ To study the visual outcomes

Moria M2 Characteristics

- ◆ 2 motors: 1 for oscillation and 1 for translation
- ◆ 15,000 rpm oscillation rate
- ◆ 2 forward speed available (1 and 2)
- ◆ Hinge anywhere

Moria M2 Characteristics

- ◆ 4 suction rings to accommodate any K
- ◆ 2 disposable heads:
 - ◆ 130 for 160 microns flaps
 - ◆ 90 for 120 microns flaps
- ◆ 3 stops for adjustable hinge size

Patients

- ◆ 80 eyes of 40 patients
- ◆ Spherical refraction -12.50 to +3 D
- ◆ Cylinder 0 to -3 D
- ◆ Age 19 to 63 (mean 31.7 ± 9.9 years)
- ◆ K-values 39.75 to 48 D (mean 44.5 D)
- ◆ Pachymetry 505 to 607 (mean 553 ± 30.5 microns)

Methods

- ◆ Suction ring selection using manufacturer's nomogram based on the steepest K-reading (same nomogram as with M2 metal)
 - ◆ -1 ring used 8 times
 - ◆ 0 ring used 59 times
 - ◆ 2 used 13 times
- ◆ 8 or 8.5 stop for largest possible ablation zone
- ◆ Faster speed in all cases
- ◆ Superior hinge in all cases

Methods

- ◆ One head for one patient, both eyes
- ◆ Excimer laser: Visx S4
- ◆ Ultrasound pachymetry done preop and after flap retracted to calculate flap thickness
(*Dr. Norden, indicate the brand name of your pachymeter*)
- ◆ Complications reported intraoperatively and postoperatively
- ◆ UCVA @ 1 day postop

Results

Flap thickness (μm)

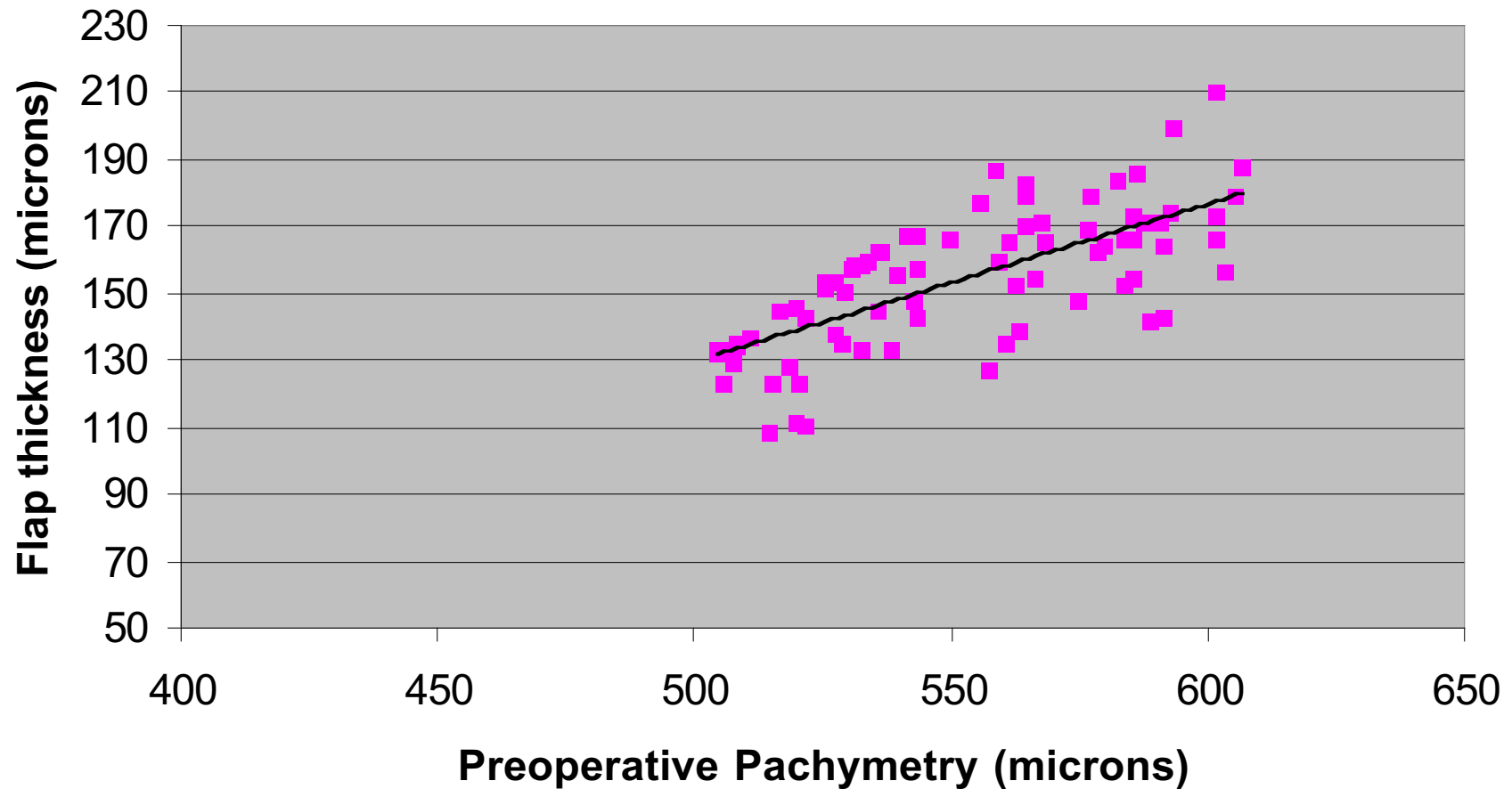
153.8 ± 20.5

min 108

max 209

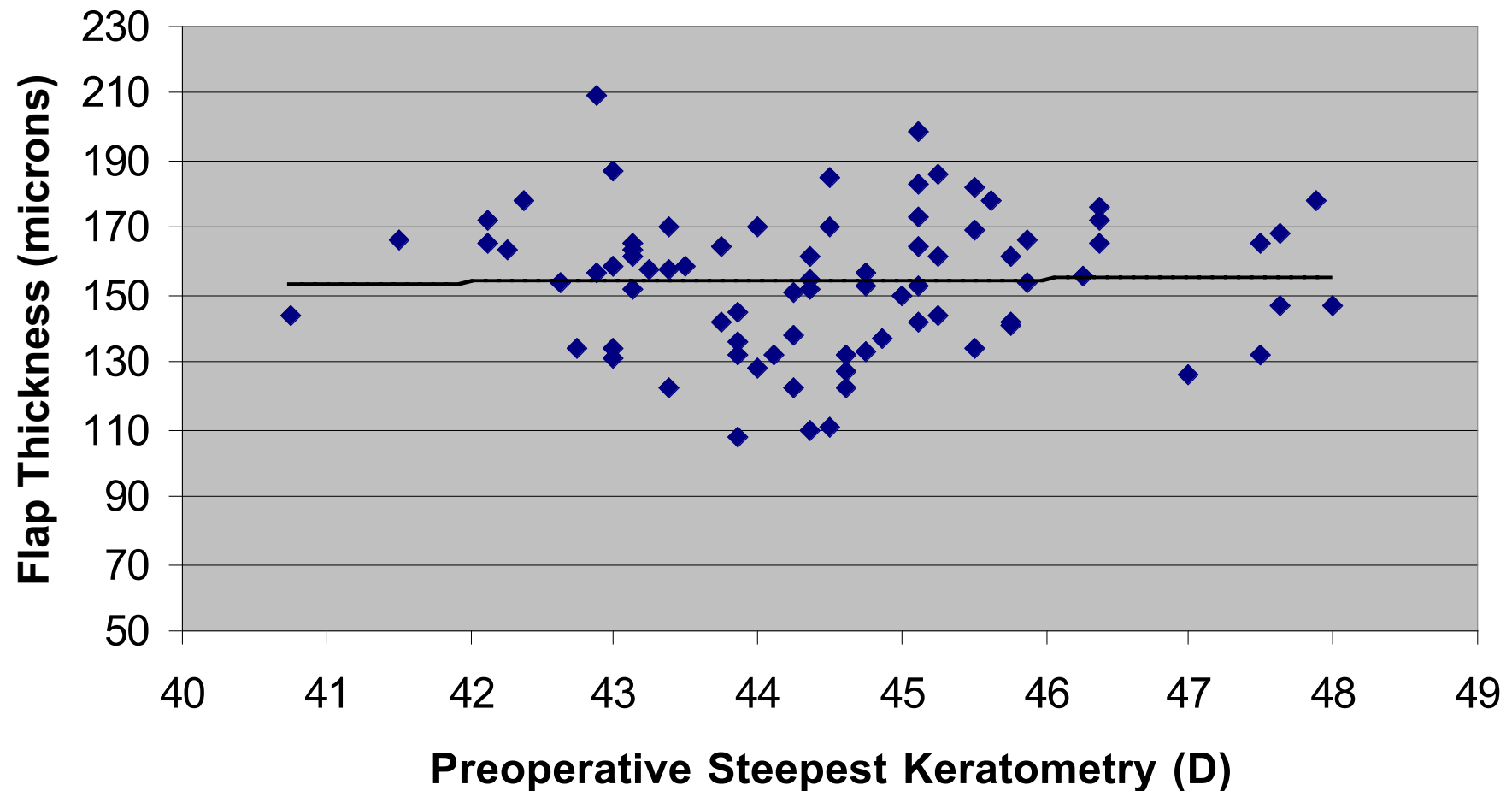
Corneal Thickness vs. Flap Thickness

M2 Single Use 130 (80 eyes)



Keratometry vs. Flap Thickness

Moria M2 Single Use 130



First vs. Second Cut in 39 patients

Flap thickness

First eye
(OD)

Second eye
(OS)

157.2 ± 20.9 (108-209)

150.6 ± 19.8 (110-187)

↳ There is only 7 microns difference in thickness with the same blade

Complications

M2 Single Use 130 % (n)

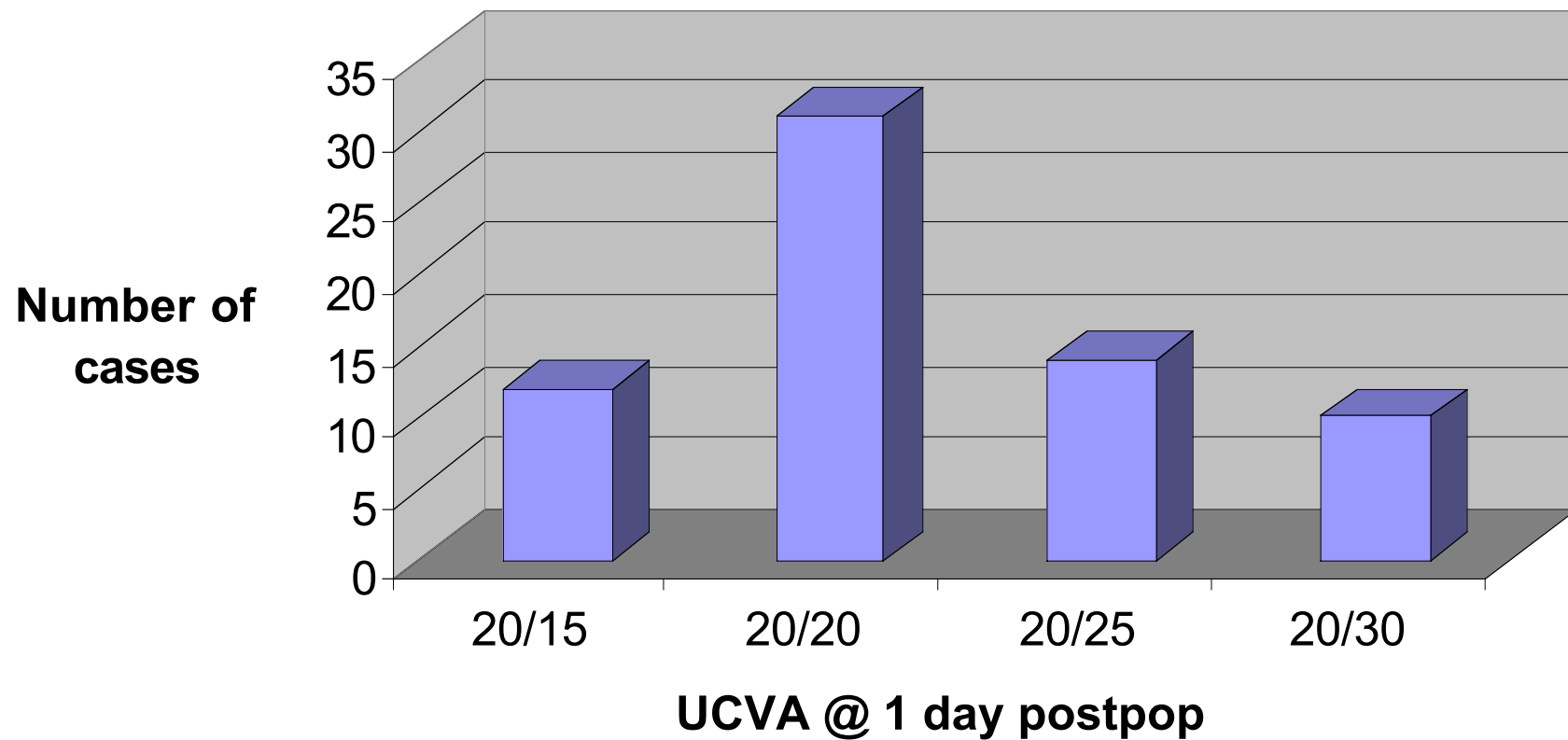
- ◆ Free cap 0%
- ◆ Incomplete flap 0%
- ◆ Button-hole 0%
- ◆ Epithelial defect 1.2% (1)
- ◆ Epithelial slider 3.8% (3)
- ◆ Microstriae 0%
- ◆ Flap wrinkles 1.2% (1)
- ◆ DLK 0%
- ◆ BCVA loss (2 lines) 0%

UCVA @ 1 day postop

- 100% of eye were 20/30 or better
- 85% of eyes were 20/25 or better
- 64% of eyes were 20/20 or better
- 18% of eyes were 20/15 or better

Visual outcomes

Visual outcomes at day 1 with M2 Single Use 130



Conclusions

- Easy switch from metal to plastic – No additional learning curve
- Translucent simplifying the keratome assembly
- Good flap thickness predictability

Conclusions

- No risks of contamination
- No risks of blade damage while inserting it into metal head
- Excellent safety profile: low complication rate, excellent visual outcomes
- Economical

The background is a dark blue gradient that transitions to a lighter blue on the right side. A thin white arc is visible on the right edge, curving from the top towards the bottom.

Thank You