

OCCLUSION

(Continued from page 20)

achieve a plano result (Table 1). It also revealed that her corneal astigmatism was significant enough to warrant CRIs.

One month after cataract surgery with a multifocal IOL and CRIs, her uncorrected visual acuity (UCVA) OS was 20/20 and J1+ with a manifest refraction of $-0.25 + 0.25 \times 006^\circ$. She was very satisfied with her new vision and enthusiastically looked forward to having surgery on her right eye.

Had we based the surgical plan on initial data without the benefit of punctal occlusion, the patient would likely have ended up with a manifest refraction of $-0.75 + 0.75 \times 045$ at best. Thus, preoperative treatment can mean the difference between needing to perform an enhancement procedure on an unsatisfied patient and having a very satisfied patient with a premium lens.

CASE 2

A 65-year-old white female presented 1 week after uncomplicated cataract surgery with a multifocal IOL (Tecnis Multifocal IOL, Abbott Medical Optics) in the left eye. She complained that the eye felt “sandy” and that her vision had worsened after postoperative day 1. Her manifest refraction was $-0.50 + 1.50 \times 175^\circ$ yielding UCVA of 20/50 and J3. Postopera-

tive dry eye and irregular astigmatism were diagnosed (Figure 3). A punctal plug was easily inserted into her left lower eyelid, and the potential need for corneal relaxing incisions was discussed.

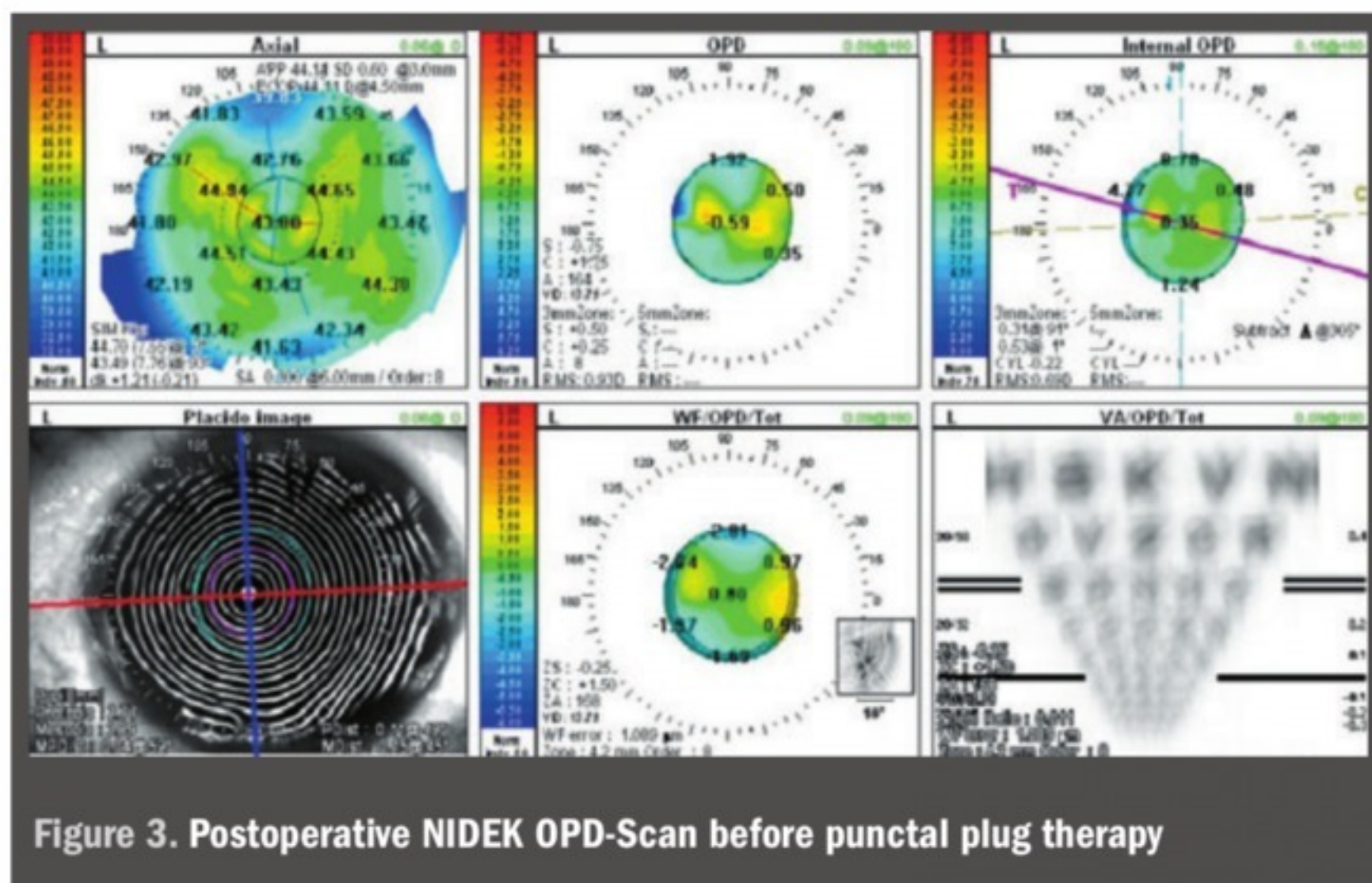
One month later, UCVA had improved to 20/25 and J1. Her MR was $-0.25 + 0.75 \times 178^\circ$, and the ocular foreign body sensation had resolved. The total wavefront error improved from 1.089 to 0.580 μm , while the root mean square (RMS) for a 3-mm pupil improved from 0.93 to 0.31 D, corresponding to a much sharper and more regular placido image (Figure 4).

Three months later, she was offered the option of a small CRI that further improved her UCVA to 20/20 and J1+, residual MR to $+0.25$ D sphere, total wavefront error to 0.349 μm , and RMS to 0.22 D.

PATIENT SATISFACTION

In this case, treatment of postoperative dry eye using punctal occlusion turned an unhappy patient with a multifocal IOL into a happy one. The improvement in her refraction with treatment demonstrates the importance of optimizing the ocular surface before performing costly and/or invasive corrective procedures that may further stress an already compromised ocular surface.

Ultimately, the goal of multifocal lens implantation is patient satisfaction with the visual outcome. Punctal occlusion before and after premium IOL surgery is a fast, safe, effective, and affordable treatment



OD		Formula: Holladay II		OS	
Alcon SN6AD1		Alcon SN6AD1		Alcon SN6AD1	
Procedure: Std Phaco		Procedure: Std Phaco		Procedure: Std Phaco	
MFG ACD(US): 5.49		MFG ACD(US): 5.49		MFG ACD(US): 5.49	
IOL	Pred.Ref.	IOL	Pred.Ref.	IOL	Pred.Ref.
24.00	0.25	23.50	0.30	23.50	0.30
24.50	-0.09	24.00	-0.04	24.00	-0.04
24.51	-0.10	24.09	-0.10	24.09	-0.10
25.00	-0.44	24.50	-0.39	24.50	-0.39
25.50	-0.80	25.00	-0.74	25.00	-0.74

OD		Formula: Holladay II		OS	
Alcon SN6AD1		Alcon SN6AD1		Alcon SN6AD1	
Procedure: Std Phaco		Procedure: Std Phaco		Procedure: Std Phaco	
MFG ACD(US): 5.49		MFG ACD(US): 5.49		MFG ACD(US): 5.49	
IOL	Pred.Ref.	IOL	Pred.Ref.	IOL	Pred.Ref.
23.00	0.53	23.00	0.37	23.00	0.37
23.50	0.19	23.50	0.03	23.50	0.03
23.92	-0.10	23.68	-0.10	23.68	-0.10
24.00	-0.15	24.00	-0.32	24.00	-0.32
24.50	-0.50	24.50	-0.67	24.50	-0.67

Table 1. Holladay II printout before and after punctal plug therapy

to improve both patient and physician satisfaction greatly. ■

References

1. Roberts CW, Elie ER. Dry eye symptoms following cataract surgery. *Insight*. 2007;32:14-23.
2. Kohlhaas M. Corneal sensation after cataract and refractive surgery. *J Cataract Refract Surg*. 1998;24:1399-1409.
3. Woodward MA, Randleman JB, Stulting RD. Dissatisfaction after multifocal intraocular lens implantation. *J Cataract Refract Surg*. 2009;35:992-997.
4. Levinson BA, Rapuano CJ, Cohen EJ, Hammersmith KM, Ayres BD, Laibson

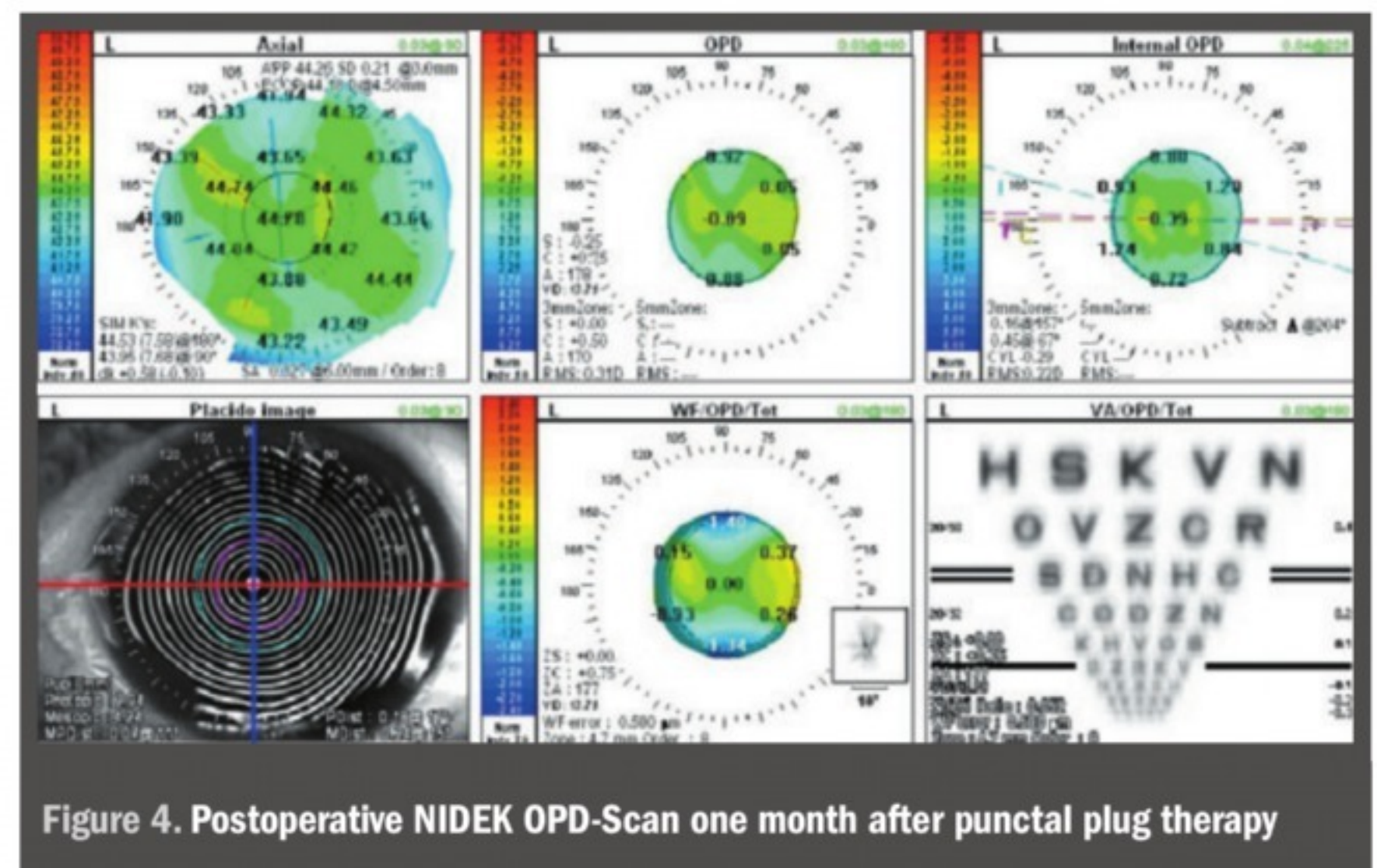


Figure 4. Postoperative NIDEK OPD-Scan one month after punctal plug therapy