

WHAT IS THE BEST WAY TO CORRECT VERY SMALL REFRACTIVE ERRORS?

Dr Margaret Kearns Dr Richard Smith
Focus Eye Centre
Sydney Australia

Schwind Vancouver 2014

CLINICAL SITUATIONS

- Small primary refractive errors
- Enhancements
 - Post cataract /RLE
- Enhancements
 - Post LASIK, post PRK

TREATMENT OPTIONS

- LASIK
- PRK with manual epithelial removal
- TransPRK with PTK
- PRK/PTK with manual epithelial removal

CASES

- 2 primary LASIK
- 8 PRK manual epithelial removal
- 4 TransPRK with PTK
- 2 PRK plus PTK manual epithelial removal

LASIK 1 second treatments

- CK 0/-0.5 aim 0 achieved 0 6/4
past cataract surgery
- B H +0.75 aim 0 achieved +0.5 6/6-
primary LASIK, result decayed, not happy

8 PRK

1 to 3 seconds, manual removal of epithelium

- BW -1.0 aim 0 achieved 0 6/4
past trans PRK myopic treatment initially
- RP -1.0 aim 0 achieved 0/0.5 6/6
past trans PRK myopic treatment initially
- TU -0.5 aim 0 achieved 0 6/4
past cataract surgery
- KW -0.75 aim 0 achieved 0 6/6
past PRK later cataract surgery
- SM +1.00/-1.5 aim 0 achieved +0.5/-0.50 6/6
past LASIK hyperopic later cataract surgery
- GW -1.5/-0.25 aim -2.00 achieved -1.75 6/6
past LASIK myopic treatment later cataract surgery
- AM -1/-0.25 aim -1.75 achieved -0.75/-0.75 6/6
past cat surgery
- GM -0.75 aim -1.75 achieved -1.00 6/6
past bilateral LASIK 2004 Myopic treatment

Trans PRK with 10 micron PTK

- Four post-cataract/RLE enhancements

PB -0.25/-0.75 target -1.50 achieved -2.00

PC -0.75/-0.50 target -1.50 achieved -1.75

GG -0.25/-1.50 target -1.75 achieved -0.50/-0.25
past RLE 2001, PRK 2002, 2008

MT -0.50/-1.50 target -1.50 achieved -3.00/-2.00
inexplicable refractive surprise, solution piggyback IOL

PRK with PTK

manual epithelial removal

VT +0.75/-0.50 aim 0 achieved 0
past PRK, epithelial erosions

MP 0/-1.25 aim 0 achieved +0.5/-1.25
past cataract and transPRK, epithelial erosions

DISCUSSION

- Technology gives us the opportunity to pursue the perfection our patients want
- These cases illustrate that while results may be good it is difficult to be sure of accurate correction in all cases
- The group is complex many with history of LASER and /or cataract surgery

WHAT IS THE BEST WAY TO CORRECT VERY SMALL REFRACTIVE ERRORS?

- All methods produce good results
- But inconsistencies do occur
- Need to consider past history in designing treatment
- Does our experience reflect other users experience
- Is it possible to treat more reliably?