

PRK WITH MITOMYCIN C FOR HIGH MYOPIA USING PULZAR Z1 FROM CUSTOMVIS, AUSTRALIA

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KERATECTASIA

< 250 MICRONS

FORME FRUSTE KERATOCONUS

HIGH MYOPIA

PRK WITH MITOMYCIN-C
HAZE

AMOUNT OF TISSUE ABLATED

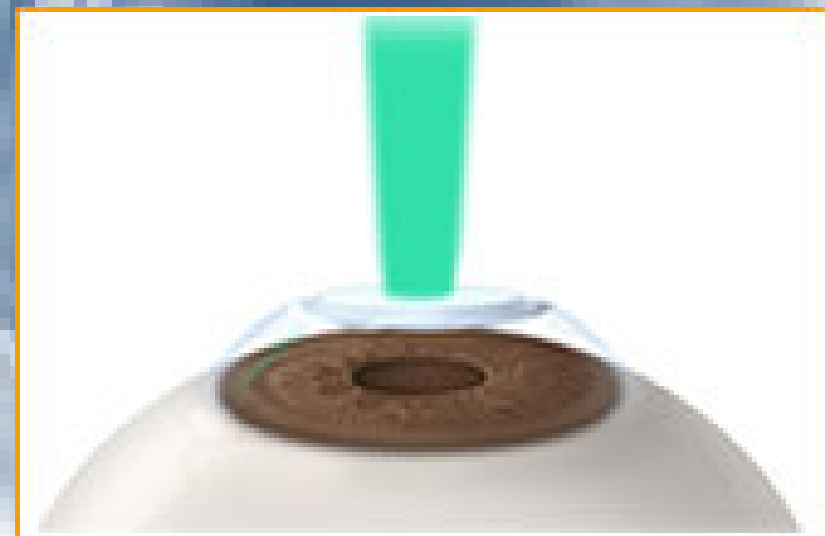
TYPE OF LASER

RACE, IRIS COLOUR & PREVIOUS
ALLERGY

EARLY – FIRST FEW WEEKS

LATE - 4-12 WEEKS

SPOT LASER, MITOMYCIN C



PRK IN HIGH MYOPIA PULZAR Z1

213 nm, CLEAN AND SMOOTH ABLATION
HYDRATION DOES NOT AFFECT ABLATION
CLOSER TO ABSORPTION PEAK

0.6mm GAUSSIAN
REPETITION RATE OF 300-400 Hz
HIGH PULSE OF PULSE ENERGY STABILITY
MINIMAL THERMAL HEATING
LIMBUS BASED EYE TRACKING
INTRAOPERATIVE EYE TRACKER



EPITHELIUM REMOVED MECHANICALLY
LASER CENTRED TO VISUAL AXIS, OPTIC ZONE 6.25 MM TO 6.5 MM
0.02% MITOMYCIN APPLIED 1 minute, 10% UNDERCORRECTION, STANDARD
THOROUGH SALINE WAS GIVEN
PREDNISOLONE EYE DROPS FOR 10 DAYS
FML EYE FOR 4 WEEKS
GATIFLOXACIN EYE DROPS FOR 5 DAYS

PRK WITH MITOMYCIN C

JUNE 2007 TO MAY 2008, 24 EYES OF 14 PATIENTS

10 FEMALES, 4 MALES, RETROSPECTIVE CHART REVIEW

MEAN SPH.EQ:-7.30±0.8 (-6.0 TO -9.12), 6 MONTHS FOLLOW UP

6/6 OR BETTER - 20 EYES (83.3%), 6/9 OR BETTER - 22 EYES (91.7%)

2 EYES MEAN REFRACTION (+1.25,-1.0D)

HAZE IN 3 EYES- 12.5%, VISUALLY SIGNIFICANT- 2 EYES(8.3%)

PRK IN HIGH MYOPIA- EXCIMER STUDIES

Lee DH et al JCRS 2005

1011 eyes, -7.82 ± 2.64 , Nidek EC 5000 Excimer laser, Intra-op MMC
72%(732) > -6 D, 28%(287) > -9 D, Follow up- 13 months(6 to 27 months)
86%-20/20 , 98%-20/40 , 86% ± 0.5 D, 93% ± 1 D, Haze -32(3.17%)

Pietila J et al JRS 2004

Aesculap-Meditec MEL 60, 5mm ablation zone, 8 years follow up
 -6.1 to -10 D- 68% of eyes ± 1 D

Helmy SA et al JRS 1996

Summit OmniMed laser, 5mm ablation zone, One year follow up
 -6 to -10 D , 39% ± 1 D, Haze-23 eyes(57%)

Sher NA et al, Ophthalmology 1994, 48 eyes -8.0 to -15.25 , FML drops-5 mon

Visx 2015, 6.2 to 6.5 mm beam diameter, 6 months follow up

40% ± 1 D, 64% ± 2 D

60% of eyes- 20/40 or better vision+

CONCLUSIONS

PRK WITH MITOMYCIN-C USING PULZAR Z1, CUSTOMVIS

RESULTED IN GOOD VISUAL OUTCOME (>-6.0)

LONG TERM FOLLOW UP ALONG WITH CONTRAST SENSITIVITY

