Early results of hyperopic LASIK using a 213 nm wavelength solid-state laser

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- The author is NOT a paid consultant of CustomVis®. However, this presentation is partly sponsored by the said company.
Objective

• To assess the safety and efficacy of laser in situ keratomileusis (LASIK) for hyperopia using the Pulzar Z1 (CustomVis), a 213-nm wavelength solid-state laser
Setting / Venue

• An out-patient refractive surgery center in Manila, Philippines
Methods

• Prospective non-comparative case series composed of 17 eyes (9 patients)
• All patients underwent LASIK using the Hansatome microkeratome and the CustomVis Pulzar Z1 solid state refractive laser
• Manifest refraction, uncorrected visual acuity, best spectacle-corrected visual acuity (BSCVA), and safety were evaluated
Results

- 17 eyes of 9 patients (2 males, 7 females)
- Age range 22-63 y/o
- Mean follow-up is 5.44 months ± 4.88 (range, 1-16 months)
Results

• Pre-op UCVA:
  - 20/40 to 20/80 = 8 eyes (47%)
  - 20/200 to 20/100 = 8 eyes (47%)
  - < 20/200 = 1 eye (6%)

• Mean Pre-op Spherical Equivalent is +2.46 diopters ± 1.16 (range, +0.75 to +4.50 D)
Results

- At 1 month follow-up, the average spherical equivalent is **0.07 diopter ± 1.11** (range, -1.50 to +2.00 diopters)

- 13 eyes (76 %) had UCVA of 20/40 or better
- 3 eyes (18 %) had UCVA of 20/70
- 1 eye (6 %) had UCVA of 20/200 (due to amblyopia)
Results

• One eye gained 1 line of Snellen BSCVA while the rest did not lose any line of Snellen BSCVA during the follow-up period
• No late post-operative complications were observed
Conclusion

• Early results of hyperopic LASIK using a 213-nm wavelength solid-state refractive laser showed that it is safe, effective, and reliable.
Thank you

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