

Comparison of Intraocular Pressure Measurement Prior and Following Full Intracorneal Ring Implantation in Patient with Keratoconus by Three Different Instruments

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Abstract : To study the measurement of intraocular pressure (IOP) before and after implantation of intrastromal corneal ring (MyoRing) in patients with keratoconus. Setting: Baqiyatallah University of Medical Sciences, Tehran, Iran. Methods: We compared the IOP of 13 eyes which underwent MyoRing implantation prior and six months post operation using Goldman applanation (as gold standard), Icare, and Corvis ST (uncorrected, corrected and corrected with cornea biomechanics). Results: The resulting intraocular pressure measurements prior to surgery, Icare, Corvis (corrected with cornea biomechanics) overestimated the IOP, however measurements by Corvis uncorrected underestimate the IOP. The resulting intraocular pressure measurements after surgery, Icare, Corvis (corrected with cornea biomechanics) overestimated the IOP but measurements by Corvis uncorrected underestimate the IOP. Conclusion: Consistent intraocular pressure measurements on eyes with Myoring in keratoconus can be obtained with the Goldman applanation tonometer as the gold standard measurement. We were not able to obtain consistent results when we measured the IOP by Icare and Corvis prior and after surgery.

Keywords : intraocular pressure, MyoRing, Keratoconus, Goldmann applanation, Icare, Corvis ST

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