1-2020

The Efficacy and Safety Profile of Netarsudil 0.02% in Glaucoma Treatment: Real-World Outcomes

Eric Shiuey, MS
Thomas Jefferson University, eric.shiuey@jefferson.edu

Melih Ustaoglu, MD

Carina Sanvicente, MD

Reza Razeghinejad, MD
Thomas Jefferson University, mohammadreza.razeghinejad@jefferson.edu

L. Jay Katz, MD

See next page for additional authors

Authors

Eric Shiuey, MS; Melih Ustaoglu, MD; Carina Sanvicente, MD; Reza Razeghinejad, MD; L. Jay Katz, MD; Jonathan Myers, MD; and Daniel Lee, MD

SI/CTR Abstract

Word count: 242/250 words

The Efficacy and Safety Profile of Netarsudil 0.02% in Glaucoma Treatment: Real-World Outcomes

Eric Shiuey, MS; Melih Ustaoglu, MD; Carina Sanvicente, MD; M. Reza Razeghinejad, MD; L. Jay Katz, MD; Jonathan Myers, MD; Daniel Lee, MD*

(*) indicates primary project advisor

Introduction: More effective glaucoma medications are necessary as medication intolerance and non-adherence remain problematic. Netarsudil is a newly FDA-approved Rho kinase inhibitor. We hypothesize that netarsudil will safely reduce intraocular pressure (IOP) compared to baseline even while other glaucoma medications are used.

Methods: This retrospective observational study was conducted on glaucoma patients seen at the Wills Eye Hospital Glaucoma Service who received netarsudil 0.02% between March and September of 2018. Intraocular pressure (IOP, via Goldmann applanation tonometry) and best corrected visual acuity (BCVA, via Snellen visual acuity charts) comparisons between baseline and 1- and 3-month follow-up visits were performed using Student's t-tests.

Results: This study included 172 eyes of 108 patients. Compared to baseline, a mean±SD decrease in IOP of 3.67±4.91 and 3.91±4.83 mmHg was noted at 1- and 3-month follow-up visits, respectively (both $p<0.001$). No statistically significant difference in IOP change between patients on ≥3 and <3 glaucoma medications at month 1 was observed ($p=0.667$). Conjunctival hyperemia was the most common side effect at

months 1 and 3 (15.7% and 23.0% of patients, respectively). Blurred vision was reported at 1- and 3-month follow-up (5.8% and 8.0% of patients, respectively), but no significant difference in BCVA was observed (p= 0.723 and 0.611, respectively).

Discussion: With a mild side effect profile, netarsudil yielded a significant IOP reduction in glaucoma patients, including significant reductions in patients on ≥3 medications. Given its efficacy and unique mechanism of action, earlier-line use of netarsudil may be considered.