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<https://reachmd.com/programs/cme/lessening-glaucoma-treatment-burden-with-topical-therapies-the-evidence-part-2/15192/>

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### Lessening Glaucoma Treatment Burden with Topical Therapies: The Evidence (Part 2)

#### Announcer:

Welcome to CME on ReachMD. This episode is part of our MinuteCME curriculum.

Prior to beginning the activity, please be sure to review the faculty and commercial support disclosure statements as well as the learning objectives.

#### Dr. Cui:

This is CME on ReachMD, and I'm Dr. Qi Cui. Combination netarsudil/latanoprost may be a helpful option for glaucoma patients who require multiple topical agents. Let's take a look at the clinical evidence supporting the use of this combination therapy.

Netarsudil is a rho-kinase inhibitor that is thought to increase aqueous humor outflow through the conventional pathway, while the prostaglandin analog latanoprost reduces intraocular pressure by increasing uveoscleral outflow. MERCURY-1 and MERCURY-2 are phase 3 superiority studies comparing a fixed-dose combination of netarsudil 0.02% and latanoprost 0.005% to monotherapies of either netarsudil or latanoprost.

Analyzed pooled efficacy and safety data from both studies were published in *Advances in Therapy* in 2020. Only adult patients with a diagnosis of open-angle glaucoma and ocular hypertension were included in the studies. Those with acuity worse than 20/200 on the Snellen chart and a history of ocular or systemic conditions thought likely to bias study results were excluded. After washout, intraocular pressure in both eyes had to be between 20 and 36 mmHg during the 8:00 AM visit and between 17 and 36 mmHg during the 10:00 AM and the 4:00 PM visits to be included. Qualifying patients were randomized to receive either netarsudil/latanoprost, single-agent netarsudil, or single-agent latanoprost to be applied daily in the evening, between 8 and 10 PM.

Primary endpoint consists of comparing mean intraocular pressure at 3 timepoints during the day at weeks 2, 6, and 12. Secondary endpoints involved comparing mean diurnal intraocular pressure at each post-treatment visit, as well as examining the proportion of patients achieving prespecified levels of mean diurnal intraocular pressure and percent change in diurnal intraocular pressure.

A total of 1,468 patients were enrolled, with 1,195 patients, or 81.4%, completing the studies. MERCURY-1 patients were treated for 12 months, while MERCURY-2 patients were treated for 3 months. Baseline demographic characteristics in the pooled populations were similar across all treatment groups. Results showed that the netarsudil/latanoprost fixed-dose combination met the criteria for superiority compared with netarsudil or latanoprost alone at all timepoints. Fixed-dose combination therapy surpassed monotherapy with respect to achieving all levels of prespecified intraocular pressure goals following treatment, as well as percent intraocular pressure reduction from baseline. The number of patients who achieved at least 30% intraocular pressure reduction from baseline after combination therapy was approximately double that of latanoprost monotherapy.

Treatment-related adverse events and ocular adverse events were highest following combination therapy. The most common reason for discontinuation of the fixed-dose combination was adverse events associated with netarsudil. The most common ocular adverse event was conjunctival hyperemia, resulting in a higher rate of discontinuation of therapy in the combination and the netarsudil groups compared to the latanoprost group. Other ocular adverse events of note were corneal verticillata in the combination and the netarsudil groups, conjunctival hemorrhage, tearing, decreased acuity, and instillation site pain discomfort.

In summary, netarsudil/latanoprost combination therapy was superior to either netarsudil or latanoprost monotherapy during and after 12 weeks of treatment. Ocular side effects, while generally mild, were more frequent than latanoprost monotherapy and resulted in higher rates of treatment discontinuation. Because single-agent therapies are often insufficient to achieving desired intraocular pressures, a combination therapy like netarsudil/latanoprost is a good option for patients who are tolerant of both agents without needing to increase the frequency in medication administration.

Thank you for giving me a few minutes of your time. This has been CME on ReachMD.

**Announcer:**

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