The advantage of adding a 3\textsuperscript{rd} or 4\textsuperscript{th} drug may be negligible

The Science behind the Tip

With the arrival of combination products, our threshold for prescribing multiple glaucoma medications has significantly decreased. These products enhance compliance by simplifying therapeutic regimens. They reduce exposure to the preservative benzalkonium chloride. And if fewer drops are used, then washout effects are less likely. Further, and for reasons still poorly understood, some drugs tend to be better tolerated locally when given in combination with timolol. This is the case for brimonidine in Combigan\textsuperscript{1} and bimatoprost in Ganfort\textsuperscript{2}. It is the impression of clinicians that this also holds true for dorzolamide in Cosopt, although there are no studies corroborating (or contradicting) this.

All these convenient aspects of combination products should not, however, make us forget to strive to limit drug use to the minimum necessary. Polypharmacy does carry a higher risk of side-effects, be it allergies, ocular surface disease or drug-specific adverse events. In a retrospective study, adding a 3\textsuperscript{rd} or 4\textsuperscript{th} drug to an existing regimen produced a clinically significant reduction in intraocular pressure in about half the patients\textsuperscript{3}. However, the cumulative probability of efficacy and safety success over the long term (based on the need for surgical intervention and/or the occurrence of intolerable side effects) was rather poor. It was 27\% at 6 months and 14\% at 1 year for adding a 3\textsuperscript{rd} drug, and 31\% and 14\%, respectively, for adding a 4\textsuperscript{th}.

In any case it is not useful to associate 2 combination products because they all contain timolol 0.5\%.

References

1. Motolko MA. Comparison of allergy rates in glaucoma patients receiving brimonidine 0.2\% monotherapy versus fixed-combination brimonidine 0.2\%-timolol 0.5\% therapy. Curr Med Res Opin. 2008;24:2663-7.


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