

Current Ophthalmological Trends in Glaucoma Management

**Research Project
Submitted by:**

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With the advent of several new glaucoma medications in the past few years, doctors today have more treatment options than ever before. Indeed, the release of these newest "wonder drugs" has sparked quite a debate regarding which medications are considered appropriate primary, secondary and tertiary therapy. In lieu of this ongoing controversy, the following study was conducted in hopes of revealing the most recent trends in glaucoma management.

BACKGROUND

A survey was prepared and mailed to 225 practicing ophthalmologists in the tri-state area (MI, OH, IN). Particular attention was paid such that the survey was mailed primarily to general ophthalmologists and glaucoma specialists only. A total of 96 surveys (43%) were returned, although 11 were unable to be utilized due to failure to follow the survey instructions or indications that the surveyed doctor did not treat glaucoma. Therefore, 85 usable surveys were obtained, yielding an outstanding response rate of 38%. Nineteen of the 85 surveys were from doctors who indicated that glaucoma management was their area of specialty.

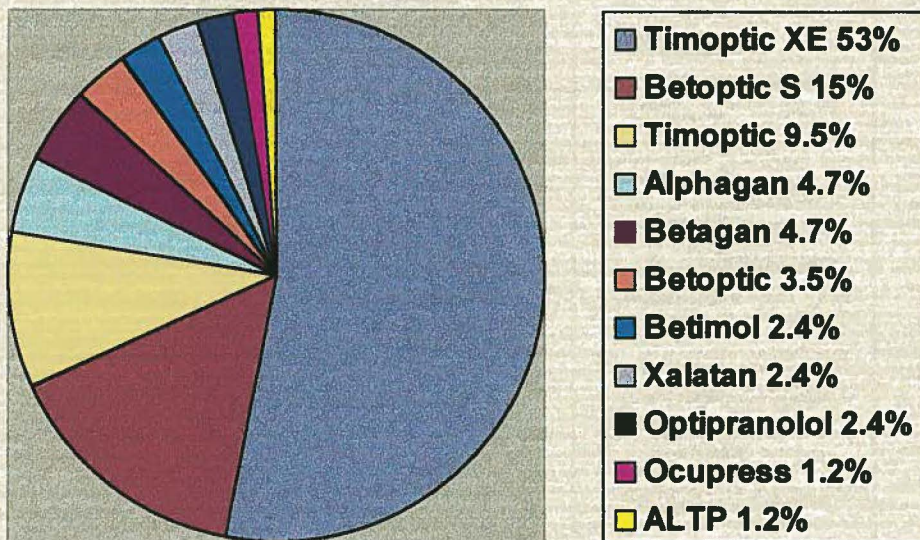
The survey was designed to factor out many of the variables that too often plague similar studies. For the purposes of the study, doctors were instructed to assume that medical contraindications were absent, cost was not a factor and that compliance was good. Furthermore, it was pointed out that the questions in the survey were purposely phrased in a very general fashion and should be answered such that they applied to most of said doctor's glaucoma cases. By placing these restrictions on the doctors, responses such as "It depends upon..." were avoided.

RESULTS

The following numbered articles depict the actual survey questions, and are immediately followed by that question's responses:

1. Which single medication or surgery do you consider primary therapy for the majority of your glaucoma cases?

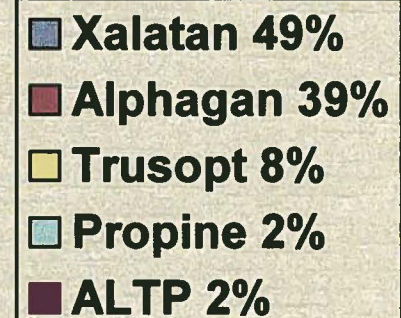
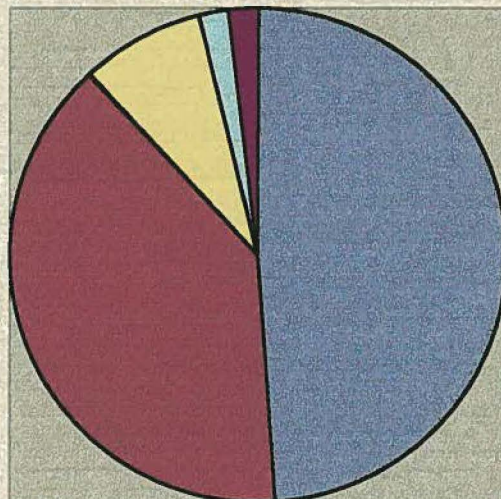
PRIMARY THERAPY (85 responses)



The consensus here is rather obvious. Following the "majority rules" adage, only those individuals who selected Timoptic or Timoptic XE as primary therapy will have their response to question two considered.

2. Assume now that your primary therapy proves effective, but a second medication or surgery is required for adequate IOP control. Which single medication or surgery would you choose to add to your primary therapy?

SECONDARY THERAPY ADDITIVE (53 responses)

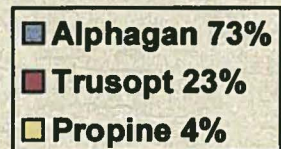
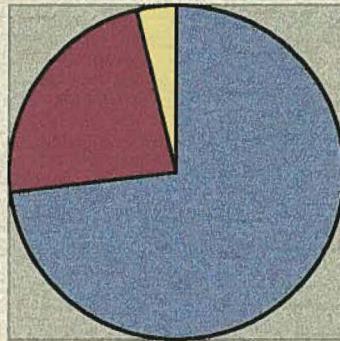


Clearly, two heavy favorites for secondary therapy have emerged based on the survey results. Therefore, only those respondents who chose Xalatan or Alphagan will have their selection for question three considered. Results for question three will be presented separately, depending upon the response to question two.

3. Assume now that your secondary therapy was also effective, but a third medication or surgery is indicated for adequate IOP control. Which single medication or surgery would you choose to add to your primary and secondary choices?

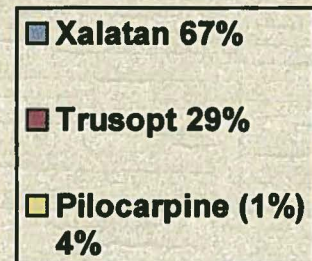
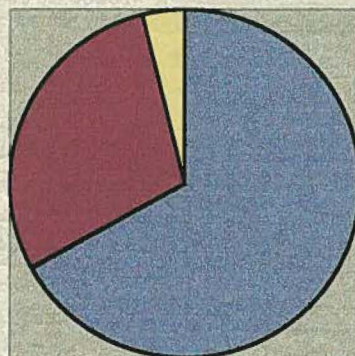
Among respondents who chose Xalatan as secondary therapy:

TERTIARY THERAPY ADDITIVE (26 responses)



Among respondents who chose Alphagan as secondary therapy:

TERTIARY THERAPY ADDITIVE (21 responses)

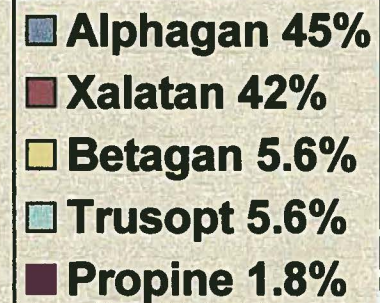
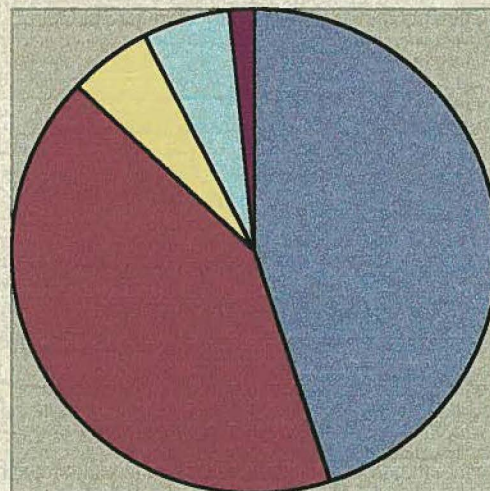


At this point, it should be noted that many of the above respondents commented that ALTP is offered to the patient as an option when a third medication is indicated.

For question four, doctors were asked to backtrack a bit and reconsider their secondary therapy with the knowledge that their first choice was now ineffective. Again, only respondents who opted for Timoptic or Timoptic XE as primary therapy will have their selection for question four considered.

4. Assume now that your primary therapy selection proved ineffective. Which single medication or surgery would you choose to replace your initial selection?

SECONDARY THERAPY REPLACEMENT (53 responses)

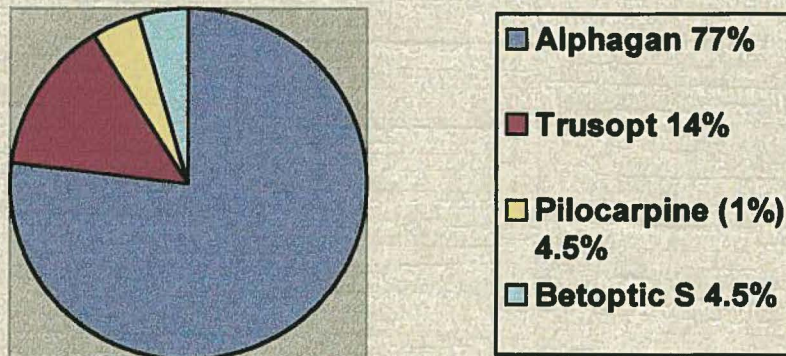


Once again, the same two heavy favorites have emerged from this group of doctors. Only those doctors who selected Xalatan or Alphagan as a second choice medication will have their response for question five considered.

5. Your second choice therapy has also proven ineffective. Which single medication or surgery would you opt to utilize in place of your second choice therapy?

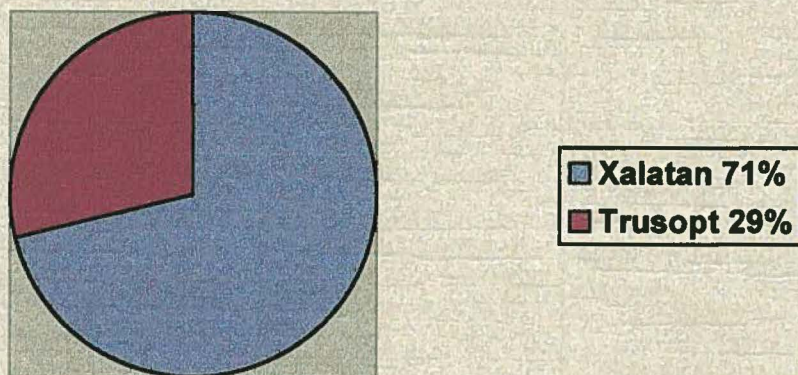
Among respondents who chose Xalatan as a second choice:

TERTIARY THERAPY REPLACEMENT (22 responses)



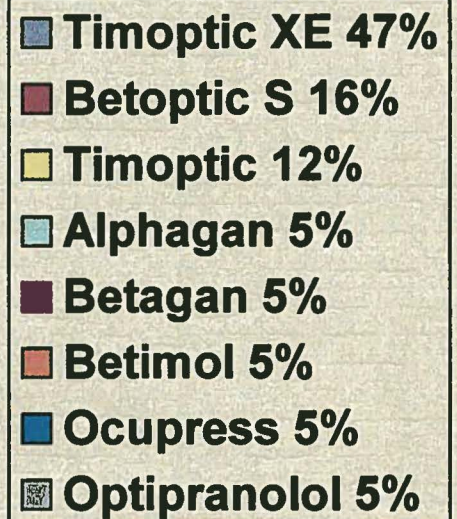
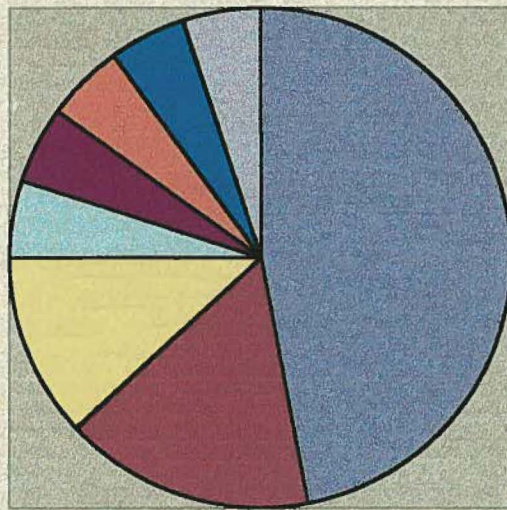
Among respondents who chose Alphagan as a second choice:

TERTIARY THERAPY REPLACEMENT (24 responses)



The final chart presented depicts primary therapy preferences among those 19 respondents who classified themselves as glaucoma specialists:

PRIMARY THERAPY AMONG GLAUCOMA SPECIALISTS (19 responses)



DISCUSSION

Obviously, three drugs emerge as the big winners in this study. By an overwhelming majority, Timoptic/Timoptic XE is still the number one choice for primary therapy among the surveyed doctors, for both glaucoma specialists and non-specialists. A long history of safety and efficacy no doubt contribute to this result. It is also clear that among the surveyed doctors, Xalatan and Alphagan have come to the forefront as popular secondary and tertiary treatment options, with some debate over which should be utilized first. This was true for both additive and replacement therapy. It is interesting to note that only 4 of the 85 respondents (4.7%) chose Alphagan as primary therapy, while only 2 of the 85 doctors (2.4%) opted for Xalatan as primary therapy.

Other medications that fared well in the survey were Betoptic S and Trusopt. As a primary therapy option, Betoptic S was the second most popular drug of choice among both glaucoma specialists and non-specialists. Trusopt scored well as a tertiary drug, for both additive and replacement therapy. It should, however, be noted that none of the 85 respondents chose Trusopt for primary therapy.

CONCLUSION

As hoped, the results of this study clearly point toward trends in glaucoma management when complicating variables such as medical contraindications, cost and compliance are factored out. The question is how much have these trends changed in recent years? In some respects, glaucoma management is very similar to what it was several years ago, as beta-blockers are still the primary drug of choice for most of the surveyed doctors. However, the emergence of Xalatan, Alphagan and Trusopt onto the scene in recent years has caused quite a shake-up in terms of secondary and tertiary therapy regimens. As these medications gain even wider acceptance, perhaps they will rise in popularity as a primary treatment option.

There is no denying that the trends in glaucoma management have drastically shifted in recent years. With the aforementioned medications playing a crucial role in this shift, and with additional "wonder drugs" on the horizon, doctors today can opt for several combinations of drugs. This study was merely intended to identify those combinations deemed most suitable by those who actually treat the disease.

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