How to Approach Patients With OHT

Clinicians share their advice on determining which patients to treat.

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The recent major clinical trials in glaucoma have identified numerous risk factors that inform clinicians of an individual patient's risk of converting from ocular hypertension (OHT) to glaucoma. Which risk factors play a role in your decision whether or not to treat a given patient with OHT, and how do you synthesize a patient's risk factor profile into a recommendation on treatment?

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The management of OHT is complicated by the fact that only a subset of patients will ultimately develop visual field abnormalities.[1-3] Considering the average monthly cost of glaucoma medication, the risks of adverse effects with therapy, the inconvenience of topical drugs, and the incidence of noncompliance, there is justification not to treat OHT indiscriminately. A thorough understanding of the evidence-based risk factors that contribute to glaucomatous progression will help clinicians to identify the appropriate candidates for therapy.

The Ocular Hypertension Treatment Study (OHTS) identified baseline risk factors for the conversion from OHT to glaucoma.[2,3] Strong evidence supports that a higher baseline IOP, thinner central cornea, older age, and increased vertical cup-to-disc ratio are significant independent risk factors for glaucomatous progression. The OHTS risk calculator is a convenient tool for estimating a patient's 5-year likelihood of conversion from OHT to glaucoma, and it may be a useful modality for initiating discussions with patients about commencing therapy.[4] Clinicians may wish to consider treatment more strongly in certain cases such as a patient with poor reliability on visual field testing, situations in which the availability of care is limited, eyes in which visualizing the optic nerve or adequately measuring IOP is difficult, patients for whom the consequence of elevated IOP is higher (eg, monocular, high risk of retinal vein occlusion), or individuals with secondary pathology (eg, pseudoexfoliation syndrome).

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> —Allison Angelilli, MD, and Jeffrey M. Liebmann, MD

Ultimately, there is no substitute for an informative discussion of the risks and benefits of therapy. When considering treatment, clinicians must weigh the known risk factors as well as the life expectancy of the patient, quality-of-life issues, and the patient's desire for therapy.

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The development of risk calculators using data from the OHTS[5] and subsequently validated using data from the European Glaucoma Prevention Study[6] has provided useful tools to help manage patients with OHT. Incorporating age, corneal thickness, IOP, visual fields, and cup-to-disc ratio, these risk calculators provide a good starting point, but physicians cannot use them without paying attention to clinical subtleties that may modify the risk assessment.

A careful examination of the optic nerve is critical. Because the OHTS did not include measurements of the optic disc's size, the risk calculators based on its data do not include this information. It is essential, however, to assess the cup-to-disc ratio in relation to the disc's size. A large disc with a large cup is more likely to be normal than a small disc with a large cup. Optic disc rims that fail to follow the ISNT rule (normal rim thickness = inferior > superior > nasal > temporal) may

also be at higher risk for developing glaucoma.

Self-reported family history was not a significant factor in the OHTS, likely due to the high prevalence of glaucoma. Individual patients who have multiple first-degree relatives with glaucoma, however, may need to be considered as being at higher risk.[7]

Ultimately, the decision whether or not to initiate treatment is the patient's. The tolerance of risk as well as of treatment is individual. Some patients may view a 20% risk of developing glaucoma in 5 years as good odds, whereas others may view a 5% risk as intolerably high. Some patients will want to avoid any medication unless absolutely necessary (ie, glaucoma confirmed by progression), but others do not want to risk any possibility of damage to the optic nerve. The keys are effective communication between the physician and patient and a decision that is compatible with the viewpoints of both.

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ANJALI M. BHORADE, MD, MS

The five main factors found in recent clinical trials to predict primary open-angle glaucoma in OHT patients were age, central corneal thickness, IOP, vertical cup-to-disc ratio, and pattern standard deviation.[6] I routinely incorporate these factors into my evaluation of OHT patients, with the exception of pattern standard deviation in the case of an unreliable visual field test. Risk calculators provide a quick and simple assessment of a patient's risk of developing glaucoma based on the aforementioned risk factors, and these tools serve as a useful springboard for discussions with individual patients. In addition, risk calculators may help clinicians to make more consistent and confident recommendations, which may help prevent the under- or overtreatment of patients in the general population.[8] I keep in mind, however, that these estimates of risk were developed using patients in a clinical protocol with strict selection criteria and that they have not yet been validated in the general population. Factors such as myopia, race, cardiovascular disease, a family history of glaucoma, and diabetes were not found to be risk factors in the prediction model for OHT but warrant further investigation.[6]

I use the risk estimate in addition to several other factors when considering whether or not to treat a patient with OHT. The latter include life expectancy, the quality of life of the patient and his or her family (convenience, tolerability of medications, and visual function), the cost of treatment, and the personality of the patient. For example, a 65-year-old individual with a borderline risk of progression to glaucoma may not desire treatment due to the cost or inconvenience of medications. Another patient of similar age and risk level may wish to start medical therapy for fear of losing any vision.

More information on the risk factors for progression to glaucoma as well as the stage at which visual impairment occurs in glaucoma is necessary to improve physicians' discussions with patients on whether or not to treat their OHT. ❑

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