Exfoliation syndrome – proceed with caution

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all in XFG and data on others is limited. “We need more directed therapy for XFG that employs a given medication as the first choice based on evidence that it has a superior IOP lowering effect.”

Some emerging data from studies evaluating bimatoprost or the fixed combination of dorzolamide/timolol suggest they may be better choices than timolol for patients with XFG. Dr Konstas mentioned a recently published multicentre, observer-masked study in the British Journal of Ophthalmology, using a crossover design comparing bimatoprost and latanoprost in patients with XFG. It evaluated diurnal IOP control after three months and attainment of target pressure, and the results favoured bimatoprost. “Perhaps the higher IOP associated with XFG allows us to see a better separation in the activity of these two prostaglandin analogues,” Dr Konstas said.

However, the impact of newer treatments for glaucoma on XFG prognosis is unknown. "What is consistently clear is that more aggressive therapy is needed for XFG. In my mind, this includes sometimes using fixed combinations as first-line therapy or perhaps use of the laser for primary intervention as available data indicates it works well and perhaps provides better long-term IOP control than medications. Of course performing surgery in a timely manner is also important," Dr Konstas said.

“Exfoliation research currently under way is particularly exciting because it may lead to more rational therapy that may allow us to prevent progression from exfoliation syndrome to glaucoma and ultimately prove to be the key positive difference between XFG and POAG,” he said.

Robert Ritch MD, professor of clinical ophthalmology, New York Medical College, and surgeon director and chief of glaucoma, New York Eye and Ear Infirmary, discussed the recently completed International Collaborative Exfoliation Syndrome Treatment (ICEST) study that was conducted with the hope of identifying a better approach to medical treatment of elevated IOP and glaucoma in eyes with XFS.

The ICEST study was an open-label, randomised study that compared treatment with pilocarpine and latanoprost versus timolol or timolol plus dorzolamide. The underlying hypothesis for the design of ICEST was that treatment with pilocarpine and latanoprost might provide particular benefit in XFS eyes via multiple mechanisms, including inhibition of pupil movement to limit release of exfoliation material and pigment, improving pressure-dependent and pressure-independent aqueous outflow, and blunting of the nocturnal IOP spike.

“Miotics are not being used much today because ophthalmologists think of pilocarpine as a four times a day drug. However, we have found that with punctal occlusion, the duration of action of pilocarpine is extended to 12 hours and that by giving a single dose of two per cent pilocarpine at night, we can achieve a 3.0 mm nonreactive pupil without making patients very uncomfortable or interfering with vision,” explained Dr Ritch.

Both latanoprost and pilocarpine were administered in the evening with a 15-minute interval between drops. Eyes randomised to begin treatment with timolol 0.5 per cent twice daily were advanced to combination treatment with the fixed combination of timolol and dorzolamide if the IOP was not sufficiently controlled.

The study followed patients for two years and also collected data after a minimum six-week washout period at the end of the trial. In addition to IOP control and visual fields, outcomes assessments performed by a masked observer included grading of trabecular meshwork pigmentation (scale 1 to 5) and outflow measurement with Schiotz tonometry.

“We were less concerned about characterising the short-term effects of treatment on IOP and more interested in seeing if after two years there was a benefit of using the combination of latanoprost and pilocarpine for improvement aqueous outflow,” Dr Ritch said.

The enrolled patients had a mean age of 69 years (range, 49 to 80) and in contrast to the features of the XFS population seen in clinical practice, there was a slight majority of men (53 per cent) and the disease was clinically unilateral in only 43 per cent of the patients.

The international study enrolled 277 patients primarily at sites in Europe. They had a mean baseline IOP of 25.1 mmHg and a baseline outflow coefficient of 0.139. Trabecular meshwork pigmentation gradings at the 6 and 12 o’clock positions were 3.3 and 3.05, respectively, and the amount of pigmentation at 6 o’clock was significantly associated with IOP but not with patient sex or age.

Data analysis was still ongoing, but Dr Ritch reported that while IOP was similar at two years in the two treatment groups, the patients treated with latanoprost and pilocarpine had a significantly increased outflow coefficient.

rITCHMD@EARTHHINK.NET
konstas@med.auth.gr
garlinda@usaor.net
ritchmd@earthlink.net