



What change to practice should we implement post ZAP trial?

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Can we now stop performing laser iridotomies on patients with narrow angles following the results of the Zhongshan Trial [1]? The study found that prophylactic laser iridotomy reduced the incidence of acute angle closure from 7.97 per 1000 eye-years in untreated eyes to 4.19 per 1000 eye-years in treated eyes.

A relatively young Chinese cohort was screened by gonioscopy and only patients with no anterior synechiae and normal visual fields were included.

The recommendation of the study is against the widespread use of laser peripheral iridotomy in primary angle closure suspects based on their current definition. They propose that this change will likely save considerable time and money and avoid unnecessary medical interventions according to their study.

It is difficult to relate this directly to an elderly Caucasian population.

Wilensky et al. found progression to acute angle closure over 2.7 years in 19.4% of patients (129 angle closure suspects of which 94% were Caucasian) [2]. Thomas et al. found a rate of progression to angle closure of 22% in a population-based study in India over 5 years [3]. Rahmani et al. demonstrated progression to angle closure in 28% in an Indian population [4].

Nd:YAG laser iridotomy is a well-established ophthalmic procedure used to treat or prevent angle closure glaucoma thereby avoiding profound visual loss. Prophylactic treatment in high-risk eyes prevents angle closure but it is also utilised in acute angle closure to allow an alternative route of aqueous drainage, breaking the attack and prevent further episodes [5, 6].

Stratification of risk is a contentious issue. The gold standard is clinical findings on dynamic gonioscopic examination but many general ophthalmologists and those specialising in other areas are not skilled in interpreting angle examination. Much inter-observer variation exists in angle assessment due in part to the many different grading systems in clinical use [7]. Some ophthalmologists revert to ‘indirect’ (non-gonioscopic) methods of examination. These factors compound and the result is disagreement regarding which patients would benefit from laser iridotomy.

One of the primary investigators in the ZAP trial was asked by the author what he would do if he had an occludable angle and the answer was ‘I would have an iridotomy’. This answer was reflected by every other ophthalmologist at this meeting (anecdotal). I would suggest the knowledge of how bad an acute attack of glaucoma can be is what would make ophthalmologists choose to have an iridotomy. If we follow the ZAP guidance and only observe patients with occludable angles, we would be subjecting patients to this traumatic event. Careful consideration of the medico-legal aspects of allowing a patient to have an acute attack is also needed.

The incidence of acute angle closure in the ZAP trial was halved by performing a laser iridotomy (4.19 vs 7.97).

The OHTS study found that treatment reduced progression to glaucoma by about half (4.4 vs 9.5) and based on this, the NICE recommendation is treatment with a prostaglandin analogue as first line [8]. Although we are clearly talking about a different eye disease, I believe the principle of treating to prevent damage remains the same.

I would suggest that we do not have enough evidence to apply the ZAP trial outcomes to a Caucasian population and very careful counselling should be done in all cases where the decision is made to observe patients with occludable angles.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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