There is little doubt that the glaucomas now constitute the second cause of global blindness, after cataract. With the ageing of most populations, new surveys suggest that even Harry Quigley’s 2000 projection of 6.7 million blind due to glaucoma was an underestimate. 1 Yet glaucoma has not been included as one of the priority conditions for disease control in the first 5-year programme of the Vision 2020 initiative. Why is this?

Although it is agreed that the burden of blindness due to different types of glaucoma is high, the problem has been that we have not had either reliable ways of detecting these diseases or straightforward ways of treating them in large populations, within prevention of blindness programmes. In the past few years, however, there have been some rapid developments which are changing our perspective.

It would seem self-evident that screening of populations for primary open angle glaucoma (POAG) – the common form in populations of African and European origin – must be a ‘good thing’ and should be encouraged. However, at present there is no single inexpensive, practical and valid screening test.

Maria Papadopoulos and Peng Khaw refer to a number of new devices for obtaining images of the optic nerve head or the retinal nerve fibre layer in POAG. Although they involve sophisticated technology and at present are expensive, it is quite possible that further refinements of these types of instruments may turn out to be the most cost-effective method of screening large populations for primary open angle glaucoma, and so meet the rigorous requirement for a satisfactory screening test.

In the meantime, we need simple and practical methods of detecting those people with moderately advanced chronic glaucoma who need immediate treatment. Colin Cook has outlined a practical approach to case detection in Africans, developed from his extensive experience in KwaZulu-Natal. It must be pointed out that the criteria for the ‘either-or’ decision as to whether a person should be referred for further investigation, and for deciding whether treatment is needed, are not the same as the criteria for case-definition of glaucoma in an epidemiological study.

The common form of glaucoma in East Asian populations is primary angle-closure glaucoma (PACG). From his studies in Singapore, Paul Foster found that patients with PACG were more likely to be blind in at least one eye than those with POAG. 2 PACG appears to be the largest cause of irreversible blindness in Asia. The risk of an eye developing angle-closure between the trabecular meshwork and the peripheral iris...
is usually indicated, in turn, by the depth of the anterior chamber in the optic axis. These anatomical features form the basis for practical screening tests, either at the slit-lamp or by ultrasound, so that a true screening programme in those populations at high risk now seems a real possibility.

The secondary glaucomas account for up to 25–30% of all glaucoma in some surveys. Eyes with secondary glaucoma are also more likely to be blind than those suffering from POAG. Drs Krishnadas and Ramakrishnan outline the main causes of secondary glaucoma. These can be grouped under 4 main headings: neovascular, uveitic, lens-related and traumatic. The relative importance of these forms will vary from location to location. Since they are all usually associated with a high intraocular pressure and reduced vision, the cases can be detected at primary and secondary levels using the protocol outlined by Cook.

Because of the burden of blindness caused by the glaucomas and the progress that is being made in controlling some of the other major causes of blindness, it is likely that the glaucomas will be included in the next 5-year strategy for Vision 2020. During the next 3 to 4 years we, therefore, need to be refining our methods for screening (or case-detection) and for treatment so that they can be applied to very large numbers of people.

References