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## Anticholinergic drugs and Glaucoma

**Guideline - Swansea Continence Team (ABM UHB) 2010**

**Recommendations** ( see page 2 for background information)

- Patients should be asked if they have a personal or strong family history of glaucoma before commencing anticholinergic medication.
- Patients with definite open angle glaucoma (diagnosis clearly documented by an ophthalmologist) or who have had a successful iridotomy, can safely be started on anticholinergic drugs without the need for specific input from their ophthalmologist.
- Patients with suspected or known angle closure ( $\pm$  glaucoma) should not be started on anticholinergics but the advice of their ophthalmologists should be sought – in particular to confirm the presence of bilateral iridotomies.
- Patients who are unsure as to any glaucoma diagnosis, or who have a strong family history of glaucoma, or who appear to be significantly long-sighted should be referred to their optometrist in Primary Care for an examination.
- High risk patients are those over 60 who have long sight, When these patients are prescribed anticholinergic medication for OAB, they should be given an information leaflet that lists the symptoms of acute angle closure and also asks the patient to request a specific examination of their eyes' anterior segments ( $\pm$  gonioscopy) at their next routine visit to their optometrist or ophthalmologist.



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## -Background

- The overactive bladder syndrome (OAB) is known to be common and may be under reported. Over 30% of the population over 40 yrs of age are affected by urinary symptoms though only 6% find them bothersome. Those who are troubled by their symptoms often suffer considerable distress, depression and social isolation.
- It is known that the prevalence of both urge urinary incontinence (UII) and OAB increases significantly with age.
- Anticholinergic medication is an effective treatment for patients with OAB and UII but can cause side effects including blurred vision, which is caused by relaxation of the ciliary muscle and failure of the accommodation reflex.
- The glaucomas are a family of related conditions united by a typical pattern of optic nerve damage which may lead to a characteristic pattern of visual field loss. The most important risk factor for the development of glaucoma is elevation of intraocular pressure (IOP). The prevalence of glaucoma also increases with age and may reach some 4% in the age groups most at risk of OAB. The commonest variety is called Primary Open Angle Glaucoma (POAG). It should be noted however that up to half of all cases of glaucoma remain undetected in the community.
- Angle closure glaucoma (ACG) is a variety of glaucoma resulting from an obstruction (by peripheral iris) of the normal drainage structures of the anterior chamber of the eye, which causes the IOP to rise. ACG usually occurs in individuals with relatively shallow anterior chambers and narrow drainage angles. Predominantly these individuals will have significant hypermetropia (long-sightedness). They will wear spectacle lenses that are thickest centrally, that magnify. ACG cases are outnumbered by other types of glaucoma by a factor of several to one.
- Such cases may present as an acute painful red eye (acute primary angle closure (APAC)) or more insidiously as a painless “creeping” angle closure by opportunistic case detection via Primary Care Optometry.
- Anticholinergic drugs may induce APAC or cause exacerbation of ACG by further ciliary muscle relaxation and forward movement of the iris-lens diaphragm which further blocks the drainage channels of the anterior chamber.
- Patients who have been diagnosed as having APAC or ACG will (should) have had bilateral prophylactic laser peripheral iridotomy procedures and will be under the care of a consultant ophthalmologist. They should not be at risk of developing an acute episode of angle closure or loss of their IOP control as a result of being prescribed anticholinergic medication for their OAB.
- Individuals with open angles, including cases of POAG, are not at risk of developing angle closure as a result of being prescribed anticholinergic medication for OAB.
- Thus an outstanding need remains to identify individuals at risk of angle closure who are either unknown to the Eye Services or who have not had bilateral laser iridotomies.
- There is, as yet, no evidence that any anticholinergic drug is safer than any other in terms of its ocular side effects.