D3 Examining patients at risk from glaucoma

Guideline

D3.01 When examining a patient who falls within the at-risk groups for primary open-angle glaucoma, the optometrist has a duty to carry out the appropriate tests necessary to determine the likelihood of the condition being present.

Advice

General

D3.02 Glaucoma can be difficult to detect in the early stages and practitioners are reminded that they should keep up to date with current thinking surrounding the pathophysiology, clinical signs and diagnostic techniques in order that they may offer patients the appropriate examinations to detect glaucoma.

D3.03 It is for the practitioner to satisfy him/herself that procedures are included or excluded according to the patient's clinical need but in addition to the guideline on the eye examination, good practice for these patients should normally include:

(a) Assessment of the optic nerve head;

(b) Tonometry. Where pressures are high or borderline, arrangements should be made for the test to be repeated, noting the time of day of each test;

the examination may also include:

(c) Central visual field assessment using perimetry with threshold control. Where necessary, practitioners should consider repeating visual fields assessment to obtain a meaningful result.

D3.04 Non-contact applanation tonometry is acceptable for screening but good practice would suggest that equivocal results be followed up with contact applanation tonometry.

D3.05 If a patient, having been given the reason for tonometry, refuses consent to the procedure, the optometrist should record this in the patient record, together with the patient's reason for refusing the procedure. The optometrist should use his/her professional judgement to decide how best to manage the patient.

D3.06 The majority of patients who can be considered to be at risk of primary open angle glaucoma will be identifiable in the course of the initial overall eye examination. They are principally patients with: high IOP, optic disc features suggestive of glaucoma, evidence of high myopia, or symptoms of loss of peripheral vision. In addition, patients with a family history of glaucoma in first degree relatives, or in certain ethnic groups (e.g. African-Caribbean people) can always be considered as being at more than average glaucoma risk, even in the absence of the above. Research has shown that patients age 40 and over are at greater risk of glaucoma. There is an increasing risk with every decade of life thereafter.

D3.07 The signs of asymptomatic primary angle closure glaucoma are almost identical to those of primary open angle glaucoma with the sole exception being an anterior chamber angle capable of closure. Assessment of the anterior eye and angle (e.g. by slit lamp van Herick technique) is advisable for all patients suspected of having glaucoma. Optometrists should be aware that the prevalence of angle closure glaucoma is greater than that of open angle glaucoma in people of South or East Asian descent.

Co-managed care

D3.08 The above advice applies to routine practice. Where co-managed care schemes are in operation, specific locally agreed protocols are likely to be operated which should take precedence.

Information

D3.09 Assessment of the optic nerve head would include assessing the size of the disc, cup/disc ratio, presence of any asymmetry between the two eyes, colour and width of the neuro-retinal rims especially superiorly and inferiorly, and unusual features such as notching, disc haemorrhage etc. Cup/disc ratios can be assessed according to grading scales.

D3.10 Practitioners are reminded that around 40% of patients with glaucoma have IOP below 21mmHg,[1] and so just because patients have an IOP that would be considered within the 'normal' range does not mean that they do not have glaucoma. It is also important to note that some patients have pressures above 21mmHg and do not have glaucoma. NICE Guidelines on the Diagnosis and Management of Chronic Open Angle Glaucoma and Ocular Hypertension, published in April 2009[2] recommend that these patients have a formal diagnosis of ocular hypertension. This should be done by an appropriate healthcare practitioner who has appropriate training or qualifications as per the NICE guideline. These patients are at a greater risk of developing glaucoma and should be monitored according to the NICE guidelines.

D3.11 The College and the Royal College of Ophthalmologists have produced joint guidance on the referral of glaucoma suspects by community optometrists.[3]

D3.12 Central visual field assessment may provide useful diagnostic information and may compliment the examination of the optic nerve head. This may prove particularly important in the diagnosis of 'normal pressure glaucoma'. Whilst visual field examination may sometimes produce anomalous results in the absence of pathology, the usefulness of baseline measures and ongoing comparisons should not be underestimated.

D3.13 Practitioners should be aware of the possibility that patients may present with other forms of glaucoma e.g. acute or sub-acute narrow angle glaucoma or secondary glaucoma due perhaps to pseudoexfoliation syndrome or pigment dispersion syndrome.

D3.14 Other relevant sections include:
Section D4 – Examining the patient under the care of an ophthalmologist
Section D10 – Referrals/notifications
Section K1 – Use and supply of drugs or medicines in optometric practice

Additional information

The following information is relevant to this section:

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Leske MC, Connell AMS, Schachat AP, Hyman L. The Barbados Eye Study. *Arch Ophthalmol* 1994 112 821-829

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Wallace J, Lovell HG. Glaucoma and intraocular pressure in Jamaica *Am J Ophthalmol* 1969 67 93

References

[1] Shah, R and Wormald, R BMJ Clinical Evidence Glaucoma 1 Sep 2006 www.clinicalevidence.com/ceweb/conditions/eyd/0703/0703_background.jsp accessed 12/12/06

[2] NICE Clinical Guideline 85: Diagnosis and management of chronic open angle glaucoma and ocular hypertension. Available at www.nice.org.uk

[3] Available at www.college-optometrists.org