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Eye (2005) **19,** 474–475. doi:10.1038/sj.eye.6701522
Published online 6 August 2004

Sir,

Reference: Community refinement of glaucoma referrals

The article by David Henson and colleagues (*Eye* (2003) **17**: 21–26) regarding employment of specially trained optometrists to screen glaucoma referrals from community optometrists attempts to show that this is cheaper than a visit to the hospital eye department.

The cost of an eye department outpatient visit is estimated at £55, which does seem high. I wonder how the group arrived at this figure and whether it could possibly be a hospital wide average outpatient cost. Costings in the NHS are notoriously difficult to pin down, but it is very important to be sure that there is a cost advantage in eye care outside the hospital setting before these schemes are more widely recommended. In our hospital I estimate that the real cost of an outpatient visit to the glaucoma clinic is between £5 and £10 including staffing costs, overheads, and disposables. Interestingly, we have also set up an optometrist-managed secondary screening clinic for glaucoma referrals, but we use hospital-employed optometrists who work in the eye department premises. In this clinic, patients are prioritised and referred to the glaucoma clinic, and are discharged if there are no abnormal findings. Audit data on 200 patients passing through this clinic indicate a discharge rate of approximately 15%, which is considerably less than the 40% nonreferral rate in Henson's study. This variance could indicate a regional variability in the quality of optician's referrals.

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Eye (2005) **19,** 475. doi:10.1038/sj.eye.6701517
Published online 6 August 2004

Sir,

Costs of shared care

The glaucoma referral refinement scheme reported from Manchester (*Eye* (2003) **17**: 21–26) has potential benefits for hospital glaucoma clinics that are struggling to keep abreast of the tide of new suspect glaucoma referrals. But the alleged cost savings are doubtful. For example, the savings to the GP of £11 700 are presumably based on an estimate of GP time and expenses in passing the referral on to the hospital: is this a realistic figure?

Hospital-based screening clinics may be a cheaper alternative. For 7 years, I have run a Nurse-led Glaucoma screening clinic to assess the urgency of referrals from optometrists. Patients attend the clinic and records are taken of the history (including details of family history and medications), visual acuity, visual field (Humphrey 24-2 threshold strategy), intraocular pressures by applanation tonometry (Perkins), and nonmydriatic optic disc photographs (Topcon). The records are examined and I write to the patient, general practitioner, and optometrist recommending follow-up by the optometrist or in the glaucoma clinic according to the findings. The clinic is audited annually.

We need to allow more responsibility to optometrists and ensure there is no financial disincentive to the follow-up of glaucoma suspects in the community. In particular, visual field defects are often artefactual rather than real, and improve when the field test is repeated. Visual field tests need careful explanation, supervision, and interpretation. Noncontact tonometry should not be performed by untrained personnel. It is good practice for an optometrist to repeat both tonometry and field tests to help reduce the false positive rate. Optometrists should be able to exercise clinical judgement and not refer nonprogressive field defects in people with anomalies, for example, optic disc drusen, tilted discs, colobomas.

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Eye (2005) **19,** 475–476. doi:10.1038/sj.eye.6701518
Published online 6 August 2004

Sir,

A closer look at anterior segment intraocular foreign bodies

Intraocular foreign bodies are not uncommon. We frequently see the patient with a red eye who has been hammering without eye protection. However, not all patients give such a clear history and it is of major importance that a foreign body is not missed especially by casualty departments. We present two case reports which highlight the need for vigilance and a high index of suspicion even if the plain X-ray is clear.

Case report 1

A 30-year-old white man had been working with a valve on a high-pressure gas cylinder when a blast of high-velocity gas hit his right eye. He had attended the local casualty department on two occasions since with a gritty red right eye. His orbital X-rays did not show any foreign body (Figure 1a). His symptoms persisted and after two weeks he was referred to the ophthalmic department. Snellen vision was 6/5 and the eye was mildly injected. There was a small faint corneal scar with an upward track at the 4 o' clock position near the limbus which was felt to be an entry site. Gonioscopy revealed a foreign body in the inferior angle. He underwent removal of a metallic foreign body with uncomplicated recovery. Snellen vision remains 6/6.

Case report 2

A 40-year-old white man was referred to the ophthalmology department 1 month after a foreign body struck his right eye while hammering a steel nail. Plain X-rays failed to show an intraocular foreign body (Figure 1b), but he suffered persistent blurring of vision in the right eye. He was noted to have a small, axial, full thickness central corneal scar, with some pigment on the anterior lens surface. Snellen vision was 6/6. Gonioscopy revealed a foreign body in the inferior angle. He underwent surgical removal of this foreign body. Recovery was uneventful and vision remains 6/6.

In both cases, the surgical technique involved dissection of a small scleral flap at the 6 o' clock position with dissection into the anterior chamber and direct removal of the foreign body with forceps (Figure 2a and b).

Figure 1 (a) Plain orbital X-ray of patient 1. No foreign body is detected. (b) Plain orbital X-ray of patient 2. Again no foreign body is demonstrated.

Comment

These two cases highlight the fact that a plain X-ray will not exclude with certainty an intraocular foreign body. Any patient with a significant history should be viewed with a high index of suspicion and a plain X-ray does not replace thorough clinical examination including gonioscopy. Davidson and Sivalingam[1] reported a similar case of a foreign body in the anterior chamber angle which was eventually discovered after gonioscopy was performed because of the high clinical suspicion.[1]

Our two cases reinforce the fact that plain X-rays are of limited value when dealing with suspected intraocular foreign bodies (IOFB). The overall detection rate of foreign bodies for plain X-rays has been reported as low as 40% with particularly poor pick-up rates for graphite, wood, and perspex.[2] Metallic foreign bodies can also be missed.[2,3] This is an important issue when considering screening before MRI scanning, as ocular damage has