



THE DELIVERY OF DIABETIC EYE CARE

The management of patients with diabetic retinopathy forms a large and increasing part of any ophthalmic department's work. There have been significant changes in the organisation of care for such patients since the advent of the English National screening programme for sight-threatening diabetic retinopathy (ENSP) and there are similar programmes operating in Wales, Northern Ireland and Scotland. Quality assurance for the ENSP programme applies not only to screening, but also to the care of patients in the hospital eye service.

This chapter addresses issues of provision of care for patients with retinopathy referred to the hospital eye service. Additional reference can be made to the ENSP website: www.retinalscreening.nhs.uk

Clinic organisation

Patients being treated for sight-threatening diabetic retinopathy should be seen in dedicated medical retina clinics, by appropriately trained staff.

1) Staff working as part of the ENSP are subject to specific training and accreditation. For a team undertaking the treatment of patients with diabetic retinopathy, the consultant and other permanent members of the team should demonstrate experience in the field by having worked in a dedicated medical retina or laser clinic for at least one year. They should also attend regular case discussions and clinical audit meetings. This should include review of outcomes in the annual report and adverse events.

There should be a clear training protocol for ophthalmologists in training and other new staff undertaking laser treatment for diabetic retinopathy. Trainees should undertake laser treatment for diabetic retinopathy under the supervision of an experienced member of the medical retina team, having completed and documented a laser safety assessment.

It is planned to map the competencies in the management of patients with diabetic retinopathy as laid out by the ENSP with the Ophthalmic Specialist Training curriculum and for career grade ophthalmologists, competencies in the treatment of diabetic eye disease will be documented via revalidation.

2) There are a number of quality assurance criteria of specific relevance to hospital eye clinics which require ongoing data collection. These include reporting of Certificate of Visual Impairment (CVI) registrations, incident visual loss, and waiting times for consultation and treatment (quality assurance standards 1, 10-13 in the ENSP). All units will need to collect and feedback such data to the screening programme and continuous electronic data collection in the eye clinics is likely to be the only practical way to do this.

3) It is recommended that a single ophthalmologist within an Ophthalmic Unit should become a clinical lead for diabetic retinopathy. This individual should ensure that adequate reporting mechanisms are in place to record clinical incidents and near misses and to ensure that these are routinely reviewed at multidisciplinary team meetings. This individual should also co-ordinate the supervision and laser safety assessments for new members of



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staff. They should also ensure that data is collected in all patients with diabetic retinopathy attending the clinics and that appropriate data is fed back at least annually to the screening programme. They should ensure that the screening programme and GP (and hospital physician if appropriate) are notified on any discharges from the hospital eye service. An exit digital photograph should be taken for future reference when a patient is discharged back to the screening programme.

4) There must be sufficient capacity, both with regard to space and staffing, for an increasingly large number of patients. Proper implementation of local screening programmes should ensure that patients at low risk of sight-threatening retinopathy can safely be discharged from the hospital eye service back to the photographic screening programme. This includes those patients who have been found not to require active management, or are unlikely to do so in the medium term, or those who have had treatment and are stable. It is imperative that appointment systems have safeguards to avoid follow up appointments being significantly delayed or patients becoming lost to follow up. This is particularly important where partial booking systems are used for follow up appointments. The cancellation and Did Not Attend (DNA) rate should be less than 10% and this forms a quality assurance standard of the ENSP.

5) It is very desirable for there to be a good link with a counselling service for patients with sight loss in the eye department. Access to Low Vision Aid services is mandatory.

Investigation

Patients should have access to fluorescein angiography and OCT (optical coherence tomography), preferably within the same unit without the need to travel, although this may be necessary where the patient is seen in an outreach clinic.

Ideally, patients requiring angiography should have the investigation on the day it is ordered. Failing this, it should be sufficiently prompt to allow patients with new proliferative retinopathy to be treated with laser within 2 weeks, and those with maculopathy within 10 weeks.

Treatment facilities

Photocoagulation remains the mainstay of treatment and argon laser is still most commonly used. Blue laser wavelengths are no longer appropriate for photocoagulation. Yellow light is particularly useful for the treatment of maculopathy, and red wavelengths may help if the patient has a thin vitreous haemorrhage but are infrequently used. Diode laser (810 nm) has been shown to be equally efficacious to other lasers, and patients find the reduced flash more comfortable, but this has yet to be used very widely. Subthreshold laser ('micropulse') with the diode is also used in some units, but the published data on its efficacy so far remains limited. It has the potential to reduce any destructive effects of macular laser treatment, with similar effects on macular oedema. It is essential to have access to a facility for indirect laser delivery. The advent of the PASCAL laser (shorter-pulsed patterned scanning laser photocoagulation, 532 nm) has had a significant impact on the delivery of scatter photocoagulation in particular because it is able to deliver



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treatment much more rapidly as well as being more comfortable for patients than conventional photocoagulation.

It is convenient for the patient if laser treatment can be carried out on the day of diagnosis of the problem needing treatment, however, it is often difficult to perform laser treatment on the same day in many hard-pressed departments. Nevertheless any patient needing urgent photocoagulation should be able to have it carried out immediately. This necessitates sufficiently frequent laser clinics or staff available to undertake the treatment outside laser clinics.

Periocular or intravitreal steroid therapy, is commonly used as an adjunct to laser photocoagulation. Any intravitreal treatments should be undertaken in an appropriate room using sterile techniques (<http://www.rcophth.ac.uk/IntravitrealInjectionsJuly2006.pdf>). Sufficient data is not yet available to recommend the routine use of intravitreal anti-VEGF treatment for diabetic retinopathy and studies are ongoing in this regard. Longer-acting intravitreal steroid delivery is also under investigation.

Biomicroscopy clinics for patients with ungradable images in the ENSP

Patients who cannot be screened using digital photography have to be referred to a biomicroscopy clinic. These include patients who are unable to cooperate with photography for whatever reason, and those with small pupils or opacities in the media. In many cases this is organized by the screening programme, but in some cases the responsibility for this will fall on the hospital eye service. This must be carried out by trained clinicians who will be subject to the same quality assurance issues as in other parts of the ENSP.

Patients with diabetes attending other ophthalmic clinics

Many patients with diabetes that attend the eye department do so for reasons other than retinopathy. Data must be collected annually from these patients, as required by the ENSP. This will be a considerable logistic burden if it is to be carried out in-house as it is unlikely that the clinics these patients attend will have the same clerical or IT support as the retinopathy service. Solutions to this difficulty include arrangements for digital photographic screening in the department, requiring awareness of the issue by administrative staff and a booking system that will register these patients as well. Alternatively, these patients could continue to be offered a formal screening appointment in the community although this does require an extra attendance by the patient. Screening programmes will continue to offer annual photographic assessment to individuals unless they have known patients under the care of the hospital diabetic retinopathy service, or they receive appropriate clinical data reports from other hospital eye service clinics.

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