

Retinopathy

DIABETIC MEDICINE

Education reduces anxiety about laser treatment

Readability	✓✓✓✓✓
Applicability to practice	✓✓✓✓✓
WOW! factor	✓✓✓

1 The purpose of this study was not only to investigate the attitude of patients towards laser treatment for retinopathy, but also to compare anxiety between groups.

2 The investigation involved 259 people (99 women and 160 men with diabetic retinopathy) who completed four questionnaires; 128 control participants were awaiting non-intervention visits and 131 people were awaiting laser treatment in four centres in Northern Italy.

3 The questionnaires were followed by open questions on whether participants understood the term 'laser' and whether they could give a description of laser treatment.

4 Patients in general could not give the reasons why they were about to receive laser treatment, if that was the case, nor could they describe laser treatment itself and what it entails. Many patients describing laser treatment used words that evoke an image of cruelty.

5 Patients who had already had photocoagulation treatment listed it as one of the most stressful events of their past year.

6 The authors conclude that laser treatment, whether it has been experienced before or not, creates a sense of anxiety and foreboding in patients, resulting in frequent non-attendance. They also reason that the best way to reduce this is through pre-operative education and counselling.

Trento M, Tomellini M, Latanzio R et al (2006) Perception of, and anxiety levels induced by, laser treatment in patients with sight-threatening diabetic retinopathy. A multicentre study. *Diabetic Medicine* **23**: 1106–9

Education allays fears about laser treatment



Deborah Broadbent, Director of Diabetic Eye Screening, Royal Liverpool University Hospital

Ophthalmologists and diabetologists know well that the timely application of laser therapy is an effective treatment for the retinal changes in diabetes: reducing blindness in up to 95% of patients with diabetic retinopathy and moderate visual loss by 50–60% in maculopathy.

Sight-threatening diabetic retinopathy is often asymptomatic, and consequently there have been worldwide initiatives to develop diabetic retinopathy screening programmes. In the UK all four nations have developed systematic screening initiatives. Performance indicators for screening programmes include targets for the referral of patients for laser treatment.

This fascinating paper from Italy, summarised on left, has investigated how people with diabetes in four different settings view laser treatment, and the degree of anxiety it induces.

Four quality of life questionnaires were administered to 259 consecutive patients comprising 131 patients awaiting laser treatment and a control group of 128 patients awaiting screening or other non-interventional

visits. The questionnaires measured depression levels, the degree of family support and patients' current anxiety state and personality tendency to anxiety. The patients were also asked whether they had ever heard of, and what they understood about, laser treatment.

Generally the scores showed higher anxiety levels in the patients awaiting laser treatment. Anxiety was highest in women and in less well-educated patients. Anxiety was highest in the centre that could not provide dedicated time for information and pre-intervention counselling. Surprisingly, having previous experience of laser treatment did not modify anxiety levels in individual centres, suggesting that the factor that did modify anxiety was the time given to information, education and reassurance.

This paper elegantly demonstrates the wide gulf that can exist between physicians and their patients. Physicians strive to practice evidence-based medicine; the evidence says that laser is good for you, but patients may view this as a bitter pill!

Time is a precious resource in today's world of medicine, but time devoted to allaying anxiety is clearly vital, not least because it establishes trust and compliance.

OPHTHALMOLOGY

Intravitreal bevacizumab is well tolerated

Readability	✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

1 This study looked at the short-term effects of intravitreal bevacizumab on active iris or retinal neovascularisation as a result of diabetes.

2 Thirty-two patients with active retinal or iris neovascularisation associated with diabetic retinopathy received an intravitreal bevacizumab injection (45 eyes). Intraocular

pressure and retinal artery perfusion were then assessed. Patients were interviewed 2–3 days after the injection and re-examined 1 week later.

3 The injection was well-tolerated in all patients, with reduction in leakage of the neovascularisation within 1 week in 44 eyes. Complete resolution of angiographic leakage from new levels of neovascularisation of the disc was observed in 19/26 eyes, and leakage of iris neovascularisation completely resolved in 9/11 eyes.

4 Short-term results suggest that intravitreal bevacizumab is well tolerated, with regression of retinal and iris neovascularisation.

Avery RL, Pearlman J, Pieramici DJ et al (2006) Intravitreal bevacizumab (Avastin) in the treatment of proliferative diabetic retinopathy. *Ophthalmology* **113**: 1695–705

‘Overall, non-mydriatic digital stereoscopic retinal imaging is a sensitive (98%) and specific (100%) method for the screening and diagnosis of diabetic retinopathy.’

ACTA OPTHALMOLOGICA SCANDINAVICA

Retinopathy lesions do not correlate with known risk factors

Readability	✓✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓

1 Previous studies have suggested that progression to sight-threatening diabetic retinopathy may be related to the development of retinopathy lesions in specific retinal areas.

2 The authors assessed whether the occurrence of retinopathy in those localised retinal areas is related to known risk factors for the progression of retinopathy in 377 people with type 2 diabetes.

3 Participants underwent a full examination including fundus photography, HbA_{1c}, blood pressure and cholesterol testing. The fundus photographs were digitised, magnified and retinopathic lesions quantified.

4 Participants with retinopathy had a significantly longer duration of diabetes and higher blood pressure and HbA_{1c} than those without retinopathy.

5 Among those with retinopathy there was no correlation between these risk factors and the overall number of microaneurysms or haemorrhages inside any of the defined areas.

6 This study of people with type 2 diabetes confirmed the established relationship between blood pressure and HbA_{1c} and the development of overall diabetic retinopathy.

7 However, it determined that the localised distribution of retinopathy lesions does not correlate with known risk factors and background factors for the development of diabetic retinopathy in the early stages of the disease.

Hove MN, Kristensen JK, Lauritzen T, Bek T (2006) The relationships between risk factors and the distribution of retinopathy lesions in type 2 diabetes. *Acta Ophthalmologica Scandinavica* **84**: 619–23

DIABETES CARE

NMDSRI is a useful screening tool

Readability	✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓

1 Images of 311 eyes from 243 people with diabetes who had dilated funduscopic examination (DFE) and non-mydriatic digital stereoscopic retinal imaging (NMDSRI) within 1 year of each other were graded for agreement.

2 There was 86 % agreement in the grading between NMDSRI and DFE; 227 eyes (73%) had no diabetic retinopathy and 40 eyes (13%) had diabetic retinopathy of the same grade.

3 In only 46 eyes (15%) was there a disagreement in the diagnosis between the two modalities.

4 Overall, NMDSRI is a sensitive (98%) and specific (100%) method for the screening and diagnosis of diabetic retinopathy.

Ahmed J, Ward TP, Bursell SE et al (2006) The sensitivity and specificity of nonmydriatic digital stereoscopic retinal imaging in detecting diabetic retinopathy. *Diabetes Care* **29**: 2205–9

BRITISH JOURNAL OF OPHTHALMOLOGY

Multiple IVTA injections not effective for DMA

Readability	✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓

1 The authors documented the effects of a second injection of 4 mg intravitreal triamcinolone (IVTA) given at least 26 weeks after the first injection into ten eyes of ten patients with diabetic macular oedema (DMA).

2 Best-corrected visual acuity (BCVA) and central foveal thickness (CFT) on optical coherence tomography were

compared after the first and repeat injections.

3 BCVA, CFT, intraocular pressure (IOP) and cataract scores were not significantly different before the first and second injections.

4 BCVA and CFT were significantly worse after the second injection.

5 There was no significant difference in IOP between injections, but two eyes had a maximum IOP of >21 mmHg after the second injection.

6 Repeated 4 mg IVTA injections may not be as effective as an initial injection, even in initial good responders.

Chan CKM, Mohamed S, Shanmugam MP et al (2006) Decreasing efficacy of repeated intravitreal triamcinolone injections in diabetic macular oedema. *British Journal of Ophthalmology* **90**: 1137–41

SCOTTISH MEDICAL JOURNAL

Mydriasis better tolerated with use

Readability	✓✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓

1 Two groups of patients with diabetes were recruited to assess their attitudes towards mydriasis for diabetic retinopathy screening.

2 Group 1 comprised 292 patients attending the diabetic clinic who had

previous experience of mydriasis; group 2 comprised 103 patients attending the mobile screening unit for non-mydriatic digital retinal photography who had no experience of mydriatic eye drops. Both groups completed a questionnaire.

3 From group 2, 42% were unhappy with the dilating eye drops, referring to a blurring of vision that could affect driving and work; 8% of group 1 were unhappy with the drops.

4 Previous experience and education signified more tolerance to mydriasis.

Murgatroyd H, MacEwen C, Leese GP (2006) Patients' attitudes towards mydriasis for diabetic eye disease screening. *Scottish Medical Journal* **51**: 35–7