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Sir,  
**Unusual ultrasound biomicroscopy appearance after non-penetrating trabecular surgery with SK gel implant**

**Case report**

We report a case of an unusual ultrasound biomicroscopy (UBM) appearance in a POAG patient at 15 months after

receiving non-penetrating trabecular surgery (NPTS). A 37-year-old male received NPTS of the right eye for POAG in a local hospital 15 months ago. After the operation, the IOP was controlled under 15 mmHg. At 14 months, he experienced severe pain in the right eye and blurred vision. Upon examination, the IOP was 50 mmHg, the cornea had oedema, and the pupil was slightly displaced superiorly. After treatment with 20% mannitol, the IOP was controlled and corneal transparency recovered. The gonioscopy examination showed that the iris root adhered to the remanent membrane of NPTS areas. Therefore, a laser iridectomy was performed and 0.005% latanoprost was administered daily, reducing the IOP to 20 mmHg.

The patient then arrived at our hospital for further treatment. Our examination results were as follows: IOP 19.5 mmHg, the bleb of right eye was pale and had a thin wall with darkening of the subconjunctival area, and the pupil decentered. The gonioscopy result showed that the iris root had adhered to the surgical area. The UBM picture is shown in Figure 1.

**Comment**

Based on the case history and examination results, we believe that after NPTS, the sudden break of the residual membrane at the operation area resulted in the pressure difference between the upper and lower surface of iris.



**Figure 1** Unusual UBM appearance of bleb and iris after NPTS.

The iris root was displaced into the bleb through the break and incarcerated, thus blocking the aqueous humor outflow and causing the IOP to rise rapidly, which is one of the complications of NPTS.<sup>1</sup>

UBM can clearly image the anterior segment of the eye, so it is widely used to evaluate the bleb and to explore the potential reasons for failure of the bleb after NPTS.<sup>2,3</sup> However, in this case, from the UBM picture, we could not identify the iris root location and its relationship with ciliary. In addition, there was a strong reflective cycle in the bleb, which could easily be misinterpreted as a bleb encapsulation. However, an encapsulated bleb would not be associated with an acute increase in IOP, as encapsulation is a slow process. In combination with the supplementary clinical examination results, we concluded that the strong reflective cycle was actually the incarcerated iris. To the best of our knowledge, this exceptional phenomena has not been reported before.

NPTS, which does not enter the anterior chamber during the operation, and in the absence of an iridectomy, would ensure little postoperation inflammation. However, a small percentage of patients were observed with an increasing IOP at prolonged periods after NPTS, which may be due to rupture of the trabeculo-decemet's membrane or adherence of iris root to the membrane.<sup>1</sup> These complications, followed up with NPTS, were induced by a consistent existing pressure difference between the upper and lower iris surface after the surgery. Therefore, it is worth considering to perform a laser iridectomy at the surgical area, before the NPTS, as a means of preventing these surgical complications.

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## Sir, Argon laser photocoagulation for diabetic macular oedema

### Case report

The Early Treatment of Diabetic Retinopathy Study (ETDRS) showed that laser photocoagulation reduced moderate visual loss (MVL) in patients with clinically significant diabetic macular oedema (CSME).<sup>1</sup> The recent UK National Diabetic Retinopathy Laser Audit showed some effect with laser treatment, otherwise there is little data from UK units.<sup>2–4</sup> We reviewed the outcome of patients treated for CSME in the Southampton Eye Unit.

All the patients referred with CSME in 1998 from our screening service were included. The Snellen visual acuity (converted to LogMAR),<sup>5</sup> number of treatments, and fluorescein angiographies performed were recorded. The patients were followed for 3 years, and the proportion of patients with MVL at 1, 2, and 3 years was compared to ETDRS data (Figure 1).

One-hundred and thirty eight eyes from 106 patients with untreated diabetic maculopathy received laser treatment. The average visual acuity at referral was between 6/7.5 and 6/9. Only four eyes developed proliferative diabetic retinopathy during the period audited. Ten eyes were excluded for coexisting ocular pathology; seven eyes underwent cataract surgery, two had vitrectomies, and one eye amblyopia. MVL occurred in 5.1% of patients at 1 year, 8.2% at 2 years, and 14.7% at 3 years. There was no statistically significant difference in

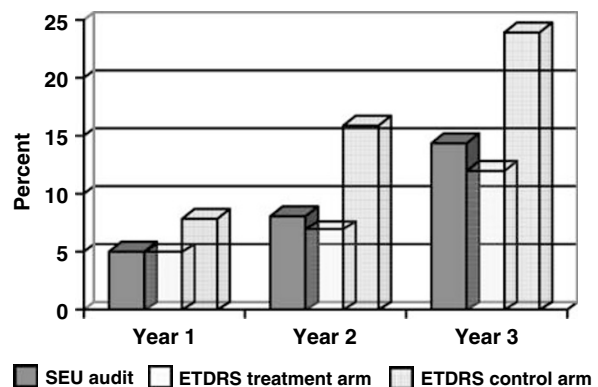


Figure 1 Graph showing incidence of MVL.