Table 1 Clinical features

Age/sex	*Preop vision*	*Type of detachment*	*Refractive status*	*Reattachment status*	*Postop vision*
66/Male	Hand motion	Macula off total RD	Emmetrope	Attached	6/60
53/Female	6/9	Macula on superotemporal RD	High myope	Attached	6/12

Comment

Inadvertent scleral perforation is a recognized complication of buckling procedures. Previous studies have suggested inadvertent scleral perforation occurring in 6% of patients and are usually associated with high myopia, thin sclera, radial placement of buckle, and reoperation after failed scleral buckling procedure.[4]

Modern vitreoretinal surgery is inconceivable without the operating microscope. It has, however, not gained wider acceptance in conventional scleral buckling procedures.

Routine use of the operating microscope to secure a scleral buckle offers significant advantages; it facilitates variable magnification with direct illumination and superior stereopsis. A better assessment of the depth of needle pass through the sclera is therefore achieved.

Excellent visualization of a scleral quadrant can be facilitated by clipping two adjacent (2/0 black silk) muscle traction sutures to the head drape with the assistant retracting the conjunctiva. Holding a muscle insertion with Moorfield's forceps in the nondominant hand improves proprioceptive input to the dominant hand when placing the suture in the sclera. A 200-mm objective lens on the operating microscope provides sufficient distance between the eye and the microscope to prevent inadvertent desterilization of instruments touching the microscope. When passing circumferentially orientated posterior sutures, the needle holder should be positioned so that the nongrasping end is pointing upwards (towards the microscope).

Sutures can be passed forehand and backhand and the technique does require the use of the nondominant hand in certain positions. A degree of ambidexterity can be acquired with practice.

During conventional scleral buckling procedure, the surgeon has to move around the table to gain access to the different quadrants of the globe. When using the operating microscope, the surgeon remains in a comfortable seated position all the time. Sitting upright at the operating microscope is also good for posture and less likely to result in back injury.

The operating microscope also facilitates trainees as the supervising surgeon assists by looking through the teaching arm of the microscope and has an excellent and equal view of the operation, and can direct advice accordingly. The magnification and illumination also facilitates the trainee in recognizing surgical anatomy and tissue planes.

We feel that the low rate of scleral perforation in our study may be owing to the routine use of the operating microscope and would advise others to adopt this method.

References

1 Mireille B. Microsurgery of retinal detachment (vitreous surgery excluded) advantaged, disadvantages, limitations, results. *Dev Ophthalmol* 1981; **2**: 208–213 (Karger, Basel).
2 Rubsamen PE, Flynn Jr HW, Civantos JM, Smiddy WE, Murray TG, Nicholson DH *et al*. Treatment of massive sub retinal haemorrhage from complications of scleral buckling procedures. *Am J Ophthalmology* 1994; **118**: 299–303.
3 Wilkinson CP, Bradford Jr RH. Complications of draining sub retinal fluid. *Retina* 1984; **4**: 1–4.
4 Brown MP, Chignell AH. Accidental drainage of subretinal fluid. *Br J Ophthalmology* 1982; **66**: 625–626.

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Sir,

Prophylactic vitrectomy in acute retinal necrosis syndrome

Acute retinal necrosis (ARN) syndrome is a progressive peripheral necrotizing retinitis caused by herpes

viruses.[1–4] As retinal detachment (RD) is its most devastating complication, prophylactic vitrectomy and retinal photocoagulation have been suggested.[1–8] This report presents the outcome of prophylactic vitrectomy in a case with severe ARN syndrome.

Case report

A 26-year-old man with 15-days history of right-sided visual loss was referred to our clinic. He had a visual acuity (VA) of 20/400, moderate anterior chamber reaction, dense vitritis, and 360° peripheral retinal necrosis in his right eye (Figure 1). Choroidal hypoperfusion of the necrotic areas was present in fluorescein angiography. Polymerase chain reaction of vitreous biopsy specimen revealed Herpes simplex virus type-1. His left eye was completely normal. Based on these findings, a diagnosis of ARN syndrome was made. Despite intensive medical treatment, necrosis and vitritis increased, and VA decreased to hand motions. Owing to this rapid deterioration, prophylactic pars plana vitrectomy, 360° endolaser photocoagulation involving the entire necrotic area and the adjacent healthy retina, and silicone oil tamponade was performed. Retinal lesions regressed, leaving atrophic changes, and VA increased to 20/30 within 3 months postoperatively (Figure 2a). However, after silicone–oil extraction in the fifth postoperative month, rapidly developing epiretinal membrane (ERM) and associated retinal tractional detachment, which involved the inferior retina, and extended towards the optic disc and the inferior temporal arcade, decreased the VA to counting fingers within 1 month (Figure 2b). Reoperation of ERM peeling, panretinal endolaser photocoagulation, and silicone–oil reinjection was performed successfully (Figure 3), and silicone–oil was extracted 6 months after this final

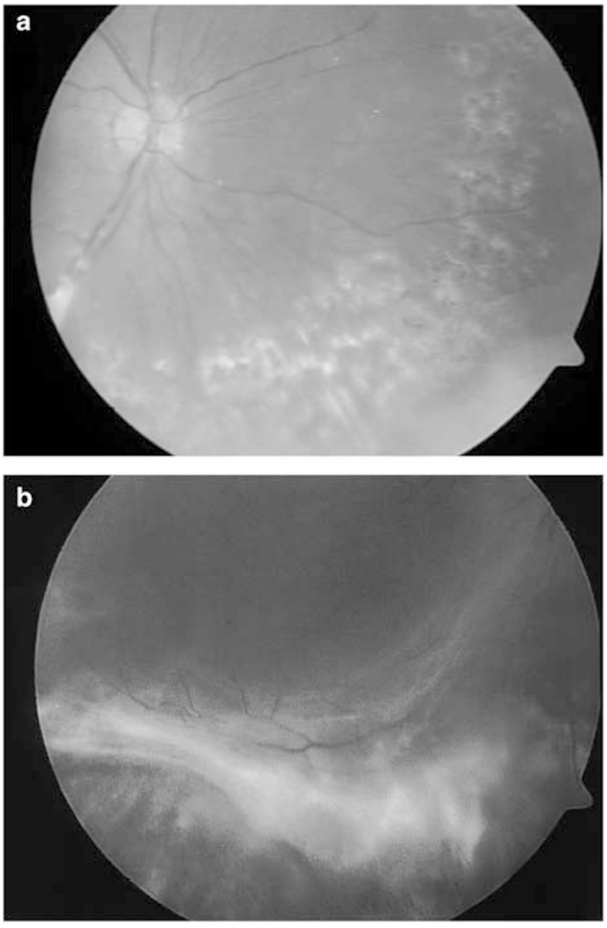

Figure 2 (a) The appearance of the retina 3 months after vitreoretinal surgery. Note that the photocoagulation scars are visible, the retina is attached, and the necrosis has regressed. (b) The appearance of the retina after silicone–oil extraction. ERM formation and associated retinal traction is present.

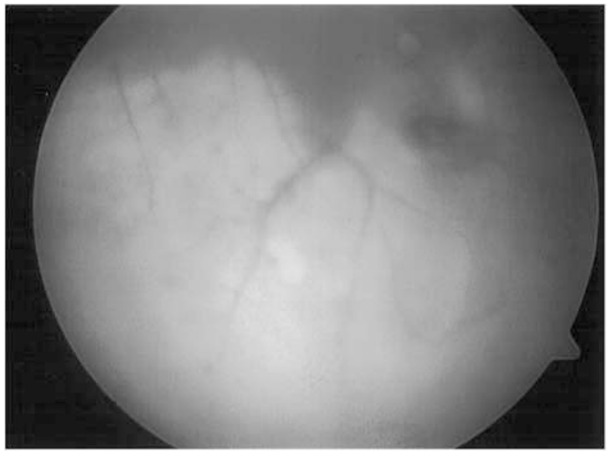

Figure 1 Fundoscopy showing severe peripheral retinal necrosis at presentation.

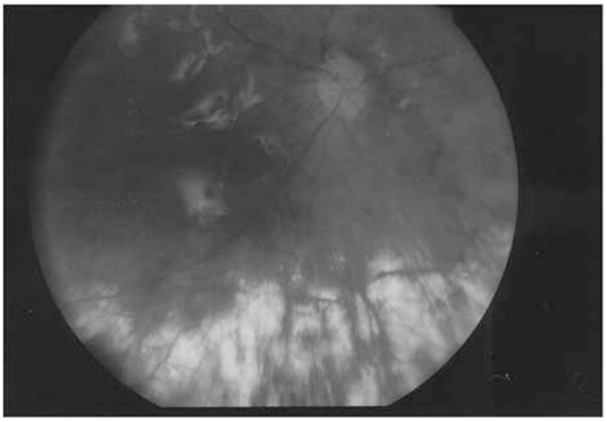

Figure 3 The appearance of the retina 2 months after ERM peeling. Retina is reattached without any remaining complications.

operation. In his last examination 1 year after ERM peeling, retina remained attached, and his VA was stabilized at 20/60.

Comment

Complicated RD develops in 50–85% of cases with ARN syndrome.[2,5,8,9] In spite of aggressive surgical interventions, reattachment rate is low.[6,7,9] Depending on this fact, prophylactic vitrectomy and retinal laser photocoagulation have been suggested in any eye with vitreous traction or opacification to reduce the rate of RD.[2,6–9] However, the long-term visual prognosis of ARN syndrome is still poor as a result of its tendency to develop ERM after the operation.[9] Most patients require more than one surgery.[1] Likewise, postoperative ERM development and associated retinal traction occured in our case, which was thought to be the result of excessive amount of retinal pigment epithelium dispersion from the areas of retinal necrosis.

Although prophylactic vitrectomy may reduce the risk of RD in ARN syndrome, postoperative epiretinal proliferation and associated retinal traction remain as a major problem, which necessitate multiple operations in such cases.

References

1 Culbertson WW, Clarkson JG, Blumenkranz M, Lewis ML. Acute retinal necrosis. *Am J Ophthalmol* 1983; **96**(5): 683–685.
2 Duker JS, Blumenkranz MS. Diagnosis and management of the acute retinal necrosis (ARN) syndrome. *Surv Ophthalmol* 1991; **35**: 327–343.
3 Fisher JP, Lewis ML, Blumenkranz M, Culbertson WW, Flynn Jr HW, Clarkson JG *et al*. The acute retinal necrosis syndrome: 1. Clinical manifestations. *Ophthalmology* 1982; **89**: 1309–1316.
4 Schlingemann RO, Bruinenberg M, Wertheim-van Dillen P, Feron E. Twenty years' delay of fellow eye involvement in herpes simplex virus type 2-associated bilateral acute retinal necrosis syndrome. *Am J Ophthalmol* 1996; **122**(6): 891–892.
5 Blumenkranz MS, Culbertson WW, Clarkson JG, Dix R. Treatment of the acute retinal necrosis syndrome with intravenous acyclovir. *Ophthalmology* 1986; **93**: 296–300.
6 Blumenkranz M, Clarkson J, Culbertson WW, Flynn HW, Lewis ML, Moo Young GA. Vitrectomy for retinal detachment associated with acute retinal necrosis. *Am J Ophthalmol* 1988; **106**: 426–429.
7 Blumenkranz M, Clarkson J, Culbertson WW, Flynn HW, Lewis ML, Moo Young G. Visual results and complications after retinal reattachment in the acute retinal necrosis syndrome. The influence of operative technique. *Retina* 1989; **9**: 170–174.
8 Sternberg P, Han DP, Yeo JH, Barr CC, Lewis H, Williams GA *et al*. Photocoagulation to prevent retinal detachment in acute retinal necrosis. *Ophthalmology* 1988; **95**: 1389–1393.
9 Clarkson JG, Blumenkranz MS, Culbertson WW, Flynn HW, Lewis ML. Retinal detachment following the acute retinal necrosis syndrome. *Ophthalmology* 1984; **91**: 1665–1668.

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Sir,

Transient formed visual hallucinations following macular hole surgery

Formed visual hallucinations with retained insight and cognition or Charles Bonnet syndrome (CBS) is known to occur after ocular surgery, albeit rarely.[1] We report an unusual case of CBS following macular hole (MH) surgery.

Case report

An 82-year-old Chinese woman presented with a best-corrected visual acuity of 6/120 in her right eye due to an idiopathic stage IV MH. The left eye had a best-corrected visual acuity of 6/12. She had no psychiatric illness or organic neurological disease.

She underwent surgical repair of the MH with three-port pars plana vitrectomy, internal limiting membrane peeling, and fluid–gas exchange with 16% perfluoropropane (C_3F_8) internal tamponade. The surgery was uneventful. She was instructed to position her head face-down for 2 weeks postoperatively.

At 2 days after the operation, she complained of 'seeing' ants crawling on the bed, kittens, and people when these were not actually present. She did not hear voices associated with these images. She was aware that these images were not real. Her vision was counting fingers and the eye had a near full fill of the gas with an attached retina. There were no similar complaints in the past. She was conscious, well-oriented, and had an intact memory. Her visual hallucinations stopped on the eighth postoperative day when the gas bubble had reduced to 80% and her vision had improved to 6/120. The MH was successfully closed and her vision improved further to 6/12 four months postoperatively.

CBS usually occurs in elderly individuals with severe visual impairment[1,2] and has been reported in a variety