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DTL Liu<sup>1</sup>, SK Rao<sup>1,2</sup>, VYW Lee<sup>1</sup>, W-M Chan<sup>1,2</sup> and DSC Lam<sup>1,2</sup>

<sup>1</sup>Department of Ophthalmology & Visual Sciences, The Chinese University of Hong Kong, Prince of Wales Hospital, Shatin, Hong Kong SAR, China

<sup>2</sup>Department of Ophthalmology & Visual Sciences, The Chinese University of Hong Kong, Hong Kong Eye Hospital, Hong Kong, China

Correspondence: DTL Liu,  
Tel: +852 2632 2878;  
Fax: +852 2648 2943.  
E-mail: david\_tliu@yahoo.com

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Sir,  
**Irrigation-free vitreoretinal surgery for recurrent retinal detachment in silicone oil-filled eyes**

After treatment of complicated retinal detachment using silicone oil,<sup>1–3</sup> recurrent detachment may still occur secondary to open retinal breaks with or without re proliferation.<sup>4–7</sup> Conventional treatment involves removal of preexisting silicone oil followed by vitreoretinal manipulations and reinjection of oil. Recently, simplified procedures have been advocated for limited proliferation.<sup>8,9</sup> We conducted a retrospective study on 13 cases in which vitreous surgery was performed under preexisting silicone oil without infusion of physiological solution. The surgical indications, techniques, and anatomical outcomes were evaluated.

All patients were treated by a single surgeon (CM Yang) from July 2002 to October 2004 at National Taiwan University Hospital. Cases were selected based on the preoperative assessment, which predicted that reattachment may be obtained without resorting to the use of vitreous cutter. All cases presented with inferior rhegmatogenous retinal detachment with or without macular involvement and localized posterior or anterior vitreoretinal proliferation.

For eyes with absent or inadequate inferior scleral buckle, a high buckle was obtained either by inferior

reinforcement of a segmental silicone sponge, or by inferior shortening of the polytetrafluoroethylene (PTFE) band, if it had been used in the previous surgery.<sup>10,11</sup> Three sclerotomies were created; the infusion line was connected to air pump in stead of balanced salt solution (BSS) bottle. Retinal traction was released by epiretinal membrane peeling or inferior circumferential relaxing retinotomy using pics, forceps, or scissors. Prominent subretinal bands were also removed through iatrogenic retinotomy. Air-subretinal fluid exchange through preexisting or iatrogenic breaks was performed. Endophotocoagulation around the break margins or in areas of suspected breaks was then executed after the retina became flattened. Silicone oil (Acri. Sil-oi 5000, Acri.Tec GmbH, Glienicke bei, Berlin) infusion to replace the air bubble was undertaken before closing the sclerotomy wounds. Scleral buckle reinforcement was not performed in three cases: one because of preexisting high buckle; the other two because of severe inferior tenon adhesion.

The patients' characteristics were presented in Table 1. All cases in this series had complete retinal reattachment in the previous operation; most developed recurrent detachment involving the periphery in 2–4 weeks after the previous operation; and all experienced slow progression of the detachment. Open breaks were identified in only half of the cases. All cases obtained successful retinal reattachment at the end of the operation. None of the operated cases had persistent postoperative perisilicone haemorrhage, high intraocular pressure, rubeosis iridis, or increased turbidity or accelerated emulsification of mixed oil. Except one case which developed recurrent detachment requiring further surgery, the remaining 12 cases had persistent attached retina throughout the follow-up periods. An example was shown in Figure 1.

#### Comment

The combined external and internal approaches utilized in this study have several advantages. First, the part of the retina which was attached preoperatively stayed attached throughout the process, thus increasing the likelihood of at least maintaining the preoperative visual acuity in the treated eye. Second, without removing the oil, the operation time is considerably reduced. Third, as oil may hold the retina in place, membrane removal is actually enhanced. Fourth, approaches from both outside and inside the eye ensure more complete release of retinal traction, thus theoretically reducing the chance of rubeosis or recurrent retinal detachment if silicone oil removal is considered. Admittedly, inferior high buckle placement alone may be adequate in treating simple inferior peripheral break without significant

**Table 1** Clinical data of the 13 cases in the study

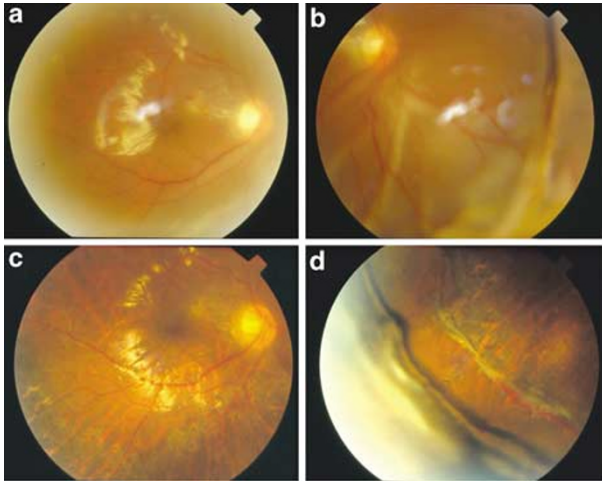
Case	Age	Sex	First diagnosis	Previous operations	Duration prior to RD (weeks)	Duration of RD	Preop BCVA	Lens status	Preop retina condition	Additional operation procedures	Postop BCVA	Postop retina condition	F/U Period (months)
1	12	M	Morning glory syndrome	PPV x II, SB, SO	2	5 weeks	HM	Phakic	RD 2Q, open break		2/200	Well attached	18
2	8	F	Morning glory syndrome	PPV, SB, SO	2	8 months	LP	Phakic	RD 2Q		LP	Well attached	18
3	27	M	Traumatic giant tear	PPV, SB, SO	16	5 months	2/200	Phakic	RD 2Q, ERM, posterior PVR 1Q, anterior PVR 2Q	ERM removal, relaxing retinotomy	4/200	Well attached	17
4	28	M	Acute retinal necrosis with giant tear	PPV, SB, SO	2	1 week	2/200	Phakic	RD 2Q, open break, posterior PVR 1Q, anterior PVR 1Q	ERM removal, relaxing retinotomy	20/200	Well attached	21
5	21	M	Idiopathic giant tear	PPV, SB, SO	3	5 weeks	20/200	Phakic	RD 2Q, open break, posterior PVR 2Q, anterior PVR 2Q	ERM removal, relaxing retinotomy	CF	RD 2Q (attached after further op)	<sup>a</sup>
6	16	M	Idiopathic giant tear	PPV, SB, SO, lens operation	4	27 months	20/200	Aphakic	RD 2Q	<sup>b</sup>	30/200	Well attached	14
7	35	M	Macular hole with RD	PPV, SB, SO	4	4 weeks	10/200	Phakic	RD 2Q		10/200	Well attached	7
8	49	M	Chronic RD with PVR	PPV, SB, SO, lens operation	4	11 months	10/200	Aphakic	RD 2Q, open break, anterior PVR with subretinal fibrosis	Relaxing retinotomy, subretinal band removal <sup>b</sup>	10/200	Well attached	6
9	64	M	Recurrent RD with PVR	PPV, SB, SO	2	7 weeks	CF	Phakic	RD 2Q, open break, anterior PVR 2Q	Relaxing retinotomy <sup>c</sup>	5/200	Well attached	33
10	50	M	Recurrent RD with PVR	PPV x II, SB, SO, lens operation	1	1 week	HM	Pseudophakic	RD 2Q		20/200	Well attached	21
11	70	M	Recurrent RD with PVR	PPV x II, SB, SO, lens operation	2	5 months	CF	Pseudophakic	RD 2Q		10/200	Well attached	19
12	36	F	Recurrent RD with PVR	PPV x II, SB, SO, lens operation	4	10 months	CF	Aphakic	RD 2Q, open break, posterior PVR 2Q	ERM removal	5/200	Well attached	18
13	19	F	Recurrent RD with PVR	PPV, SB, SO, lens operation	2	7 weeks	CF	Aphakic	RD 2Q, open break, posterior PVR 2Q	ERM removal	5/200	Well attached	17

BCVA = best-corrected visual acuity; CF = counting finger; ERM = epiretinal membrane; F = female, F/U = follow-up; HM = hand motion; LP = light perception; M = male; PPV = pars plana vitrectomy; PVR = proliferative vitreoretinopathy; Q = quadrant; RD = retinal detachment; SB = scleral buckling; SO = silicone oil injection into vitreous cavity.

<sup>a</sup>Recurrent retinal detachment involving macula happened 2 weeks after operation.

<sup>b</sup>Scleral buckle reinforcement was not performed due to severe inferior tenon adhesion.

<sup>c</sup>Scleral buckle reinforcement was not performed due to preexisting high buckle.



**Figure 1** Case 4, recurrent retinal detachment after initial operation. (a) Silicone oil was filled in the vitreous cavity, and the macula was attached. (b) Detached retina with posterior PVR change was noted in the inferior nasal quadrant. (c) After inferior scleral buckle reinforcement and vitreous surgery under silicone oil, the posterior pole remained attached. (d) High inferior buckle was seen and the inferior retina became reattached.

proliferation.<sup>12</sup> However, buckling alone is not useful when there has already been a high buckle in place; severe tissue adhesion around the previous buckle may prevent buckle reinforcement. The limitation of this method is in treating cases with significant and widespread proliferating tissue or cases with tented retina and large breaks with possible subretinal oil. The presence of the crystalline lens was not found to be a contraindication for this technique. In performing this technique, adequate diathermy to the lower peripheral retinal vessels should be performed before retinotomy to decrease the possibility of bleeding and postoperative recurrent reproliferation.<sup>13</sup> For an adequate and complete drainage, a larger than usual drainage retinotomy or more than one retinotomies may be necessary. We prefer the use of air–fluid exchange followed by oil–air exchange to direct oil–fluid exchange using silicone oil pump connected to the infusion line,<sup>8,14</sup> because, by using the air pump with fixed pressure, intraocular pressure may be better controlled.<sup>9</sup> In addition, by monitoring the air entering the vitreous cavity, the start and the end of the drainage process may be better recognized. The duration of the inferior detachment in each case varied greatly in this series. Our results indicated that the severity of reproliferation was more important than the detachment duration to affect the surgical outcome.

In conclusion, in this small series, the results seemed to support the concept that, with proper preoperative fundus assessment, combined inferior buckle and

vitreous surgery under the preexisting silicone oil may be a simplified and useful method to treat recurrent inferior retinal detachment without extensive proliferation in silicone oil-filled eyes.

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C-M Yang<sup>1</sup>, Y-T Hsieh<sup>1,2</sup>, C-H Yang<sup>1</sup> and K-R Liu<sup>1</sup>

<sup>1</sup>Department of Ophthalmology, National Taiwan University Hospital, Taipei, Taiwan

<sup>2</sup>Department of Ophthalmology, Buddhist Taipei Tzu Chi General Hospital, 289 Jian-Guo Road, Xindian, Taipei 231, Taiwan

Correspondence: C-M Yang,  
Tel: + 886 2 2312 3456 ext 5187;  
Fax: + 886 2 2341 2875.  
E-mail: chungmay@ha.mc.ntu.edu.tw

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Sir,  
**Bilateral stellar neuroretinitis in a patient with dengue fever**

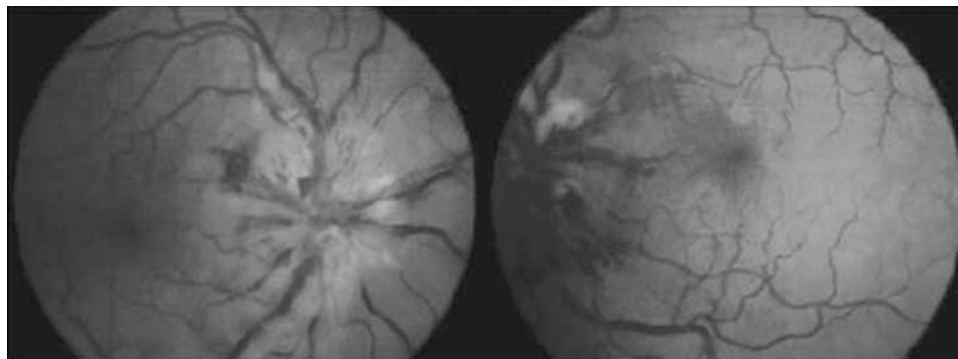
Dengue fever is a disease caused by an arbovirus transmitted by the *Aedes aegypti* and *Aedes albopictus* mosquito, endemic to Southeast Asia and Southeast Africa,<sup>1</sup> as well as Brazil, all of which are tropical regions.

Dengue fever, especially the classic variety, rarely affects the eye, but when it does, the consequences may be severe. In 1929, Anargyros<sup>2</sup> described bilateral retrobulbar neuritis in a patient with dengue fever.

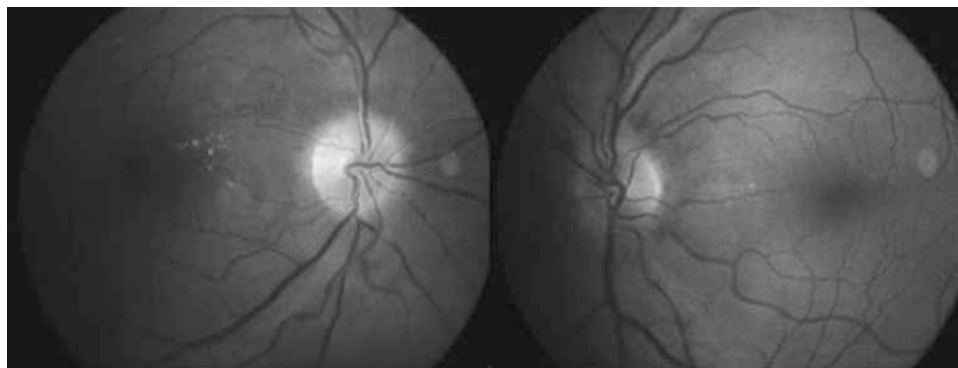
The purpose of this report is to describe a case of bilateral stellar neuroretinitis in a patient diagnosed with classic dengue fever during an epidemic in Natal, Northeast-Brazil, in 2003, as yet unreported in the literature.

**Case report**

A Brazilian male patient aged 42 years from Natal was referred by an infectologist for assessment of low visual acuity in both eyes for the past 4 days. The patient had been experiencing asthenia, headaches, back pain, retro-orbital pain, skin rash and fever for 12 days and had been clinically diagnosed with dengue fever. Ophthalmological examination revealed best correct visual acuity: right eye – 20/50, left eye – 20/30; Applanation tonometry: 15 mmHg in both eyes (OU); slit-lamp examination: anterior segment was normal, vitritis (+ / + + + +); and using Volk 78D lens, bilateral papillitis was observed with areas of serous



**Figure 1** Bilateral optic disc swelling with hemorrhages and macular star.



**Figure 2** Bilateral resolution of the optic disc swelling with minimal hard exsudates.