

Sir,

We read with interest Mr Abu El-Asrar's article on giant retinal tears after pars plana vitrectomy.¹ He stated that although patients 1 and 3 underwent pars plana lensectomy besides vitrectomy, complete removal of the vitreous base could not be performed initially. To accomplish maximum removal of basal vitreous gel, a lensectomy must be performed in most phakic eyes as trauma to the lens is very likely when working in the anterior vitreous. On the other hand, tractional bands are formed between peripheral iris structure and vitreous gel due to the anterior chamber reactions in penetrating injuries. Exposure of these structures is only possible if deep scleral depression is done. It is obvious that incomplete removal of peripheral vitreous base creates much higher spontaneous giant retinal tear incidence than Freeman's suggestion.²

As giant retinal tears are always associated with posterior vitreous detachment, retinal pigment epithelial cells and other components of the fibrocellular proliferation cascade can gain easy access to the retinal surface and form epiretinal membranes, leading to proliferative vitreoretinopathy (PVR).³ We think 360° cryotherapy was very extensive for patients 2 and 4 and it could cause haemorrhage, submacular pigmentary clumping and increase PVR. We suggest two or three rows of contiguous laser photocoagulation to the margins in the treatment of giant retinal tears, as described previously.^{4,5}

Both silicone oil and gas tamponades offer high rates of retinal reattachment in the management of giant retinal tears. However, in general, giant breaks of 180° or less can usually be managed with gas tamponade, while breaks larger than 270° are probably best managed with silicone oil.⁵ Gas tamponade would be appropriate for patients 2 and 4.

References

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Sir,

I thank Drs Batman and Cekic for their interest regarding my report on 'Giant retinal tears after pars plana vitrectomy'.¹ It is undoubtedly very important that excision of the vitreous gel in the periphery is performed. However, young patients frequently have incomplete posterior vitreous separation interfering with complete removal of the vitreous gel, and detachment of the residual vitreous is noted in the post-operative period as seen in the patients included in this report. In addition, patient 3 underwent diagnostic and therapeutic vitrectomy to treat post-traumatic endophthalmitis. Drs Batman and Cekic would appreciate that trying to make total vitrectomy in endophthalmitis is hazardous in the presence of inflamed retina. Vitrectomy in these cases is confined to the central portion of the vitreous to avoid placing any stress on the retina.

Cryotherapy was applied to the edge of the retinal flap when the retina was flat using perfluorocarbon liquid (PFCL). This minimises dispersion of retinal pigment epithelial cells into the subretinal space. A potentially harmful effect of cryotherapy is dispersion of viable retinal pigment epithelial cells.² Therefore, a meticulous lavage of the vitreous fluids is performed around the PFCL bubble to remove the dispersed retinal pigment epithelial cells and debris after cryotherapy. There is vast

clinical experience indicating that cryotherapy is effective and safe in treating most eyes with retinal detachment. Therefore, many surgeons continue to use cryotherapy in the management of giant retinal tears.³ Currently, I frequently use the indirect ophthalmoscope to deliver three or four rows of laser photocoagulation to posterior retinal flap and posterior to ora serrata in the fundus periphery not involved in the giant tear. The outcome of the two treatment modalities is similar.

The third issue raised by Drs Batman and Cekic concerns my use of silicone oil as an internal tamponade in patients 1 and 4. Some form of internal tamponade is necessary to keep the retina in position while chorioretinal scarring takes place. A long-acting gas or silicone oil tamponade is used depending on the surgeon's choice and experience. I prefer, like others,³⁻⁶ temporary tamponade with silicone oil. There are several advantages of using silicone oil compared with gas in the management of giant tears: during PFCL-silicone oil exchange, slippage of the posterior edge of the giant tear is less likely than with fluid-air exchange; silicone oil provides excellent clarity of the media throughout the course of the exchange; use of silicone oil avoids maintaining a prolonged head-down position; finally, the excellent clarity of the media provided by silicone oil allows laser photocoagulation augmentation in the post-operative period if needed. The complications related to silicone oil are avoided by earlier removal of silicone oil, at about 6-8 weeks after the operation.

References

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