Guest Editorial

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Giant Retinal Tears

Giant retinal tears, especially with the retina folded on itself inspire awe. When I was doing fellowship in the 1980s it also evoked fear as a major surgical challenge. The sight of our mentor, Dr. Badrinath getting supine on the floor without sacrificing sterility and the patient being turned into prone position before fluid-air-exchange is permanently etched in the mind. The advent of perfluorocarbon liquids in the 1990s revolutionized the management of these cases and tackling giant retinal tears without PVR with MIVS and wide angle viewing systems is a fairly straightforward surgical task, provided basic surgical principles are adhered to and correct techniques adopted.

Principles of management and steps to ensure surgical success:

i) *Role of Buckle: Encirclage is placed only in phakic eyes where lens is retained, as total base excision cannot be achieved. If it is a 360° giant tear the encirclage has no role.*

ii) *Lens: Unlike earlier, Lensectomy is not routinely performed. If lens removal is required, a Phaco-emulsification with IOL is preferred.*

iii) *Vitrectomy: A complete vitrectomy must be performed. Remember that posterior vitreous detachment may not always be present. The anterior edge of the tear should be excised upto the ora serrata (detached pars plana epithelium can be spared). If the posterior edge is 'scrolled' it should be 'unrolled' and if very stiff, should be excised. When injecting PFCL care should be taken to see that the edge is not folded over under the PFCL before starting laser to the edge of the giant tear. For laser, combination of endolaser and indirect ophthalmoscopic delivery is used. Infusion pressure should be kept low to avoid formation of multiple PFCL bubbles in periphery and getting the dreaded implication of sub-retinal and especially sub-foveal PFCL. Incomplete vitrectomy before injection of PFCL increases changes of lifting up of edge of GRT postoperatively, extensive epi-retinal membrane and macular pucker.*

For tamponade silicon oil is preferred in most cases and a direct PFCL-silicon oil exchange done because of less chances of slippage of retinal edge. All anterior fluid should be removed before starting the exchange. Silicon oil should be removed early in these cases, often within 4-6 weeks, if adequate retinopexy is achieved.

With meticulous surgical technique the anatomical and functional prognosis in fresh giant retinal tears is very good. Confounding factors can be giant tears in hereditary vitreo-retinal degenerations, large radial posterior extensions and PVR.

Prophylaxis for the other eye is an important aspect of management. 360° laser photocoagulation is of doubtful value. In high risk cases like hereditary vitreo-retinal degenerations and strong family history of giant tear, prophylactic scleral buckle should be done.

The deliberations on giant retinal tears in this issue should further clarify some of the controversies and help in even better management of these cases.

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