

Residual triamcinolone acetonide at macular hole after vitreous surgery

Dear Editor,

We read with interest the article, 'Residual triamcinolone acetonide at macular hole after vitreous surgery' by Kumar

et al.^[1] We would like to congratulate the authors and share our experience and views regarding this issue.

A six-year-old child who presented to us with complaints of decreased visual acuity in his right eye following trauma with a ball, was found to have a full thickness macular hole (MH). His best corrected visual acuity (BCVA) was 20 / 200, with no other signs of blunt trauma. The patient underwent standard three port pars plana vitrectomy and internal limiting membrane (ILM) peeling under general anesthesia. After posterior vitreous detachment (PVD) induction with the help of preservative-free triamcinolone acetonide (TA) subretinal migration of TA was noted [Fig 1a]. We aspirated the excess TA over the retinal surface and proceeded with peeling of the ILM after staining it with brilliant blue dye [Fig 1a]. Fluid air exchange was performed and 20% SF6 gas was injected into the vitreous cavity. The patient was advised prone positioning for three days. At two weeks of follow up, the MH failed to

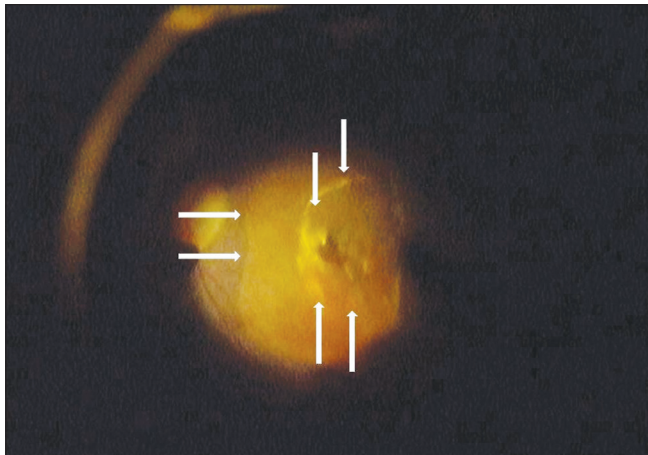


Figure 1a: Intraoperative photograph showing subretinal migration of triamcinolone acetonide through the macular hole (vertical arrows) and nasal edge of the area from where the internal limiting membrane (ILM) has been peeled after staining it with brilliant blue dye (horizontal arrows)



Figure 1b: Postoperative fundus photograph showing persisting macular hole and large area of retinal pigment epithelium atrophy surrounding the hole

close and showed a large area of retinal pigment epithelial (RPE) atrophy around it [Fig 1b]. The visual acuity did not improve beyond the preoperative level. The MH persisted till four months of follow up.

Subretinal migration of TA during MH surgery and deposition in the area of the hole postoperatively has been described in literature. Even as most reports conclude that this does not adversely affect the anatomical and functional outcome of the surgery,^[1-3] there is a single case report suggesting that the presence of TA crystals in a hole may prevent its complete closure.^[4] Our case demonstrates that subretinal migration of TA during MH surgery may interfere with hole closure despite successful ILM peeling and result in RPE atrophy. We did not try to remove the residual TA in the MH completely during surgery by any active surgical maneuvers because of the risk of damaging the RPE on the floor of the MH, which is known to hinder visual recovery after hole closure.^[3]

The above-mentioned issues can be dealt with by using autologous heparinized whole blood to cover the macular area prior to administering TA. Whole blood acts as a mechanical barrier, preventing the migration or deposition of TA in the hole and ameliorates any effect of TA on RPE function or closure of the hole. Autologous whole blood and serum have been used previously for MH closure with varied functional results. Thus, in addition, whole blood can act as an adjuvant agent or biological glue. It can be easily obtained during surgery from a peripheral vein and is an economic and non-toxic intraoperative tool.^[5] This technique can also prevent the potential toxicity of other dyes used to stain the ILM on the bare RPE in the area of the hole.

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References

1. Kumar A, Sinha S, Gupta A. Residual triamcinolone acetonide at macular hole after vitreous surgery. *Indian J Ophthalmol* 2010;58:232-4.
2. Yamauchi Y, Nakamura H, Hayakawa K, Sawaguchi S. Persistence of triamcinolone acetonide following macular hole surgery. *Acta Ophthalmol Scand* 2006;84:711-2.
3. Hikichi T, Furukawa Y, Ohtsuka H, Higuchi M, Matsushita T, Ariga H, *et al.* Improvement of visual acuity one-year after vitreous surgery in eyes with residual triamcinolone acetonide at the macular hole. *Am J Ophthalmol* 2008;145:267-72.
4. Koto T, Inoue M, Shinoda K, Ishida S, Tsubota K. Residual crystals of triamcinolone acetonide in macular hole may prevent complete closure. *Acta Ophthalmol Scand* 2007;85:913-4.
5. Lai CC, Chuang LH, Wang NK, Yeung L, Chen YP, Hwang YS, *et al.* Preventing the deposition of triamcinolone in macular hole by use of whole blood in triamcinolone-assisted membrane peeling. *Retina* 2007;27:932-7.

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Quick Response Code:	Website: www.ijo.in
	DOI: 10.4103/0301-4738.81042
	PMID: 21586865