Persistent macular detachment after successful macular hole closure and its management in an emmetropic eye

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Abstract:
Macular hole with a concomitant macular detachment is unusual in emmetropic eyes. A middle aged women was operated for a full thickness macular hole with inverted flap technique. There was persistence of subretinal fluid for 4 months even after the hole was successfully closed. A second surgery was performed to remove the highly viscous subretinal fluid. This report highlights the technical difficulties in managing such cases. This case also highlights the need for recognition of coexisting pathologies before deciding the surgery.

Keywords:
Internal limiting membrane inverted flap technique, macular detachment, macular hole, subretinal fluid

Introduction
A 56-year-old female presented with a large macular hole (minimum hole diameter: 815 μ) with neurosensory detachment (NSD) of four disc diameters in her right eye. The axial length was 22.37 mm [Figure 1a and b]. Twenty-five-gauge pars plana vitrectomy with internal limiting membrane peeling (perfluorooctane-assisted inverted flap technique) and SF6 tamponade was done. Postoperatively, macular hole closed but the NSD persisted over 4 months [Figure 2a-c]. Drainage retinotomy was made in the paramacular area to remove subretinal fluid (SRF), and perfluorocarbon liquid was used to flatten the macula [Figure 3a-d]. Air-gas (C3F8) exchange was done under direct visualization. The aspirated SRF was very viscous, and the flute cannula was placed in the retinotomy till the very end of C3F8-air exchange. Trace SRF persisted at the end of the surgery. Postoperatively, SRF significantly decreased and resolved completely at 4 months. The best-corrected visual acuity stabilized at 6/18 Snellen lines [Figure 2d-f].

Comment
The prevalence of macular hole retinal detachment (RD) is reported to be <1% of all RDs. These are commonly encountered in high myopia with posterior staphyloma.1 It is rare in emmetropic eyes as they present usually with isolated macular hole and cuff of SRF or secondary macular hole in long-standing RD. In the present case, macular hole occurred in the setting of anomalous posterior vitreous attachments which caused additional macular detachment. This was overlooked and managed as a simple macular hole. Hence, the detachment persisted even after the closure of the hole. This case emphasizes the need to address concomitant macular detachment during primary macular hole surgery. Draining the SRF through a paramacular drainage retinotomy than through macular hole itself may be better in such cases.2 When the detachments are chronic, we should anticipate difficulties

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in draining the highly viscous SRF completely and delay in resolution of residual fluid. This entity needs to be identified preoperatively, and surgical maneuver should aim at closure of macular hole as well as complete flattening of detachment in the primary surgery.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

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