

Unfolding falciform folds and their consequences - To touch or not to touch

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Abstract

Background: Falciform folds are congenital tractional retinal folds due to strong contractile forces and hyperextensibility of retina resulting in temporal dragging of the macula and often associated with familial exudative vitreoretinopathy and retinal detachment (RD). Retinologists are reluctant to treat these entities in view of their poor visual recovery. **Purpose:** To describe a novel surgical technique to unfold the falciform folds. **Synopsis:** This video demonstrates innovative surgical techniques to remove both pre-retinal and sub-retinal adhesions and unfold these folds, managing its consequences and visual recovery. We describe cases of congenital falciform folds with poor visual acuity, where we did vitrectomy, membrane adhesion removal, peeling of the internal limiting membrane (ILM) the macula, mechanical stretching of the folded retina by Tanno scraper or Finesse flex loop, then sub-retinal injection of balanced salt solution (BSS) by 38 gauge sub-retinal needle to create multiple blebs around the folded retina and finally sulphur hexafluoride tamponade. Post-operative macular hole with RD can be a complication. When this falciform fold is complicated by RD, there is risk of intraoperative subretinal migration of infusion cannula and therefore the need for peripheral relaxing retinectomy for redundant retinal fold as well as silicone oil as endotamponade. Vision improved in all our patients after the surgery. **Highlights:** Both long-standing pre-retinal adhesions as well as sub-retinal adhesions are responsible for the formation of congenital falciform folds. For pre-retinal adhesions, vitrectomy with removal of all the adhesions along with peeling of the sticky ILM and then mechanical stretching of folded retina by Tanno scraper or Finesse flex loop are necessary. To remove sub-retinal adhesions, sub-retinal injection of BSS is necessary to stretch the folded retina from behind, but it should be done away from the retina to avoid formation of macular hole.

Online Video Link: <https://youtu.be/9h8IE3abKIM>

Key words: Falciform fold, ILM peeling, Sub-retinal BSS injection, Retinal detachment

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