
SUBRETINAL PERFLUOROCARBON IN THE MACULAR REGION: A CASE REPORT

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➤ **PURPOSE**

- To report a case of subretinal perfluorocarbon (PFC) persistence post-vitreotomy affecting the fovea.

➤ **METHODS**

- Case reports.

➤ **CASE REPORT**

- Female patient;
- 51-years-old;
- Sudden loss of vision in the right eye (OD);
- Visual Acuity (VA): count fingers in face;
- Fundoscopy: grade 3 vitreous hemorrhage;
- Ultrasound: inferior nasal rupture.



➤ CASE REPORT

- After 13 days:
 - Phacoemulsification + posterior vitrectomy using PFC + octafluoropropane (C₃F₈) tamponade
 - At 19th day postoperative follow-up (DPO):
 - Presence of a PFC drop affecting the foveal subretinal region, causing elevation of the neurosensory retina in this region
 - Uncorrected VA: 20/200
 - At 22th DPO:
 - Surgical re-approach with PFC drop aspiration with backflush soft tip ®
 - At 12th DPO post-2nd procedure:
 - VA with correction of 20/30
 - Little retinal hemorrhage at the site where the aspiration was performed
 - At 73th DPO post-2nd procedure:
 - VA with correction of 20/25
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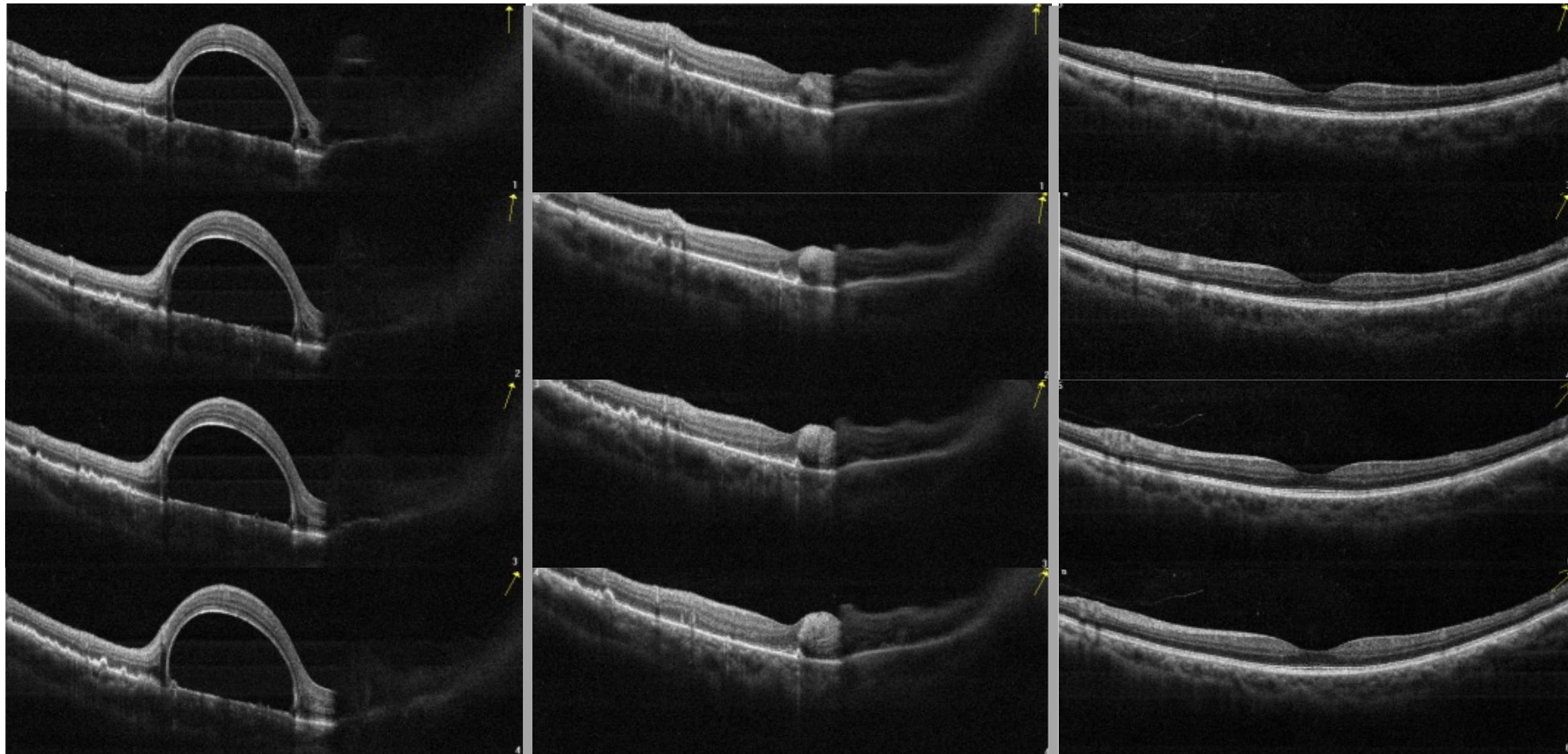


➤ CASE REPORT

19th DPO
FACO+LIO+VPP

12th DPO - VPP+PFC
aspiration

73th DPO VPP+PFC
aspiration



➤ DISCUSSION

PFC

- Unique chemical properties favor adhesion of the pigment epithelium;
- Drainage of subretinal fluid through retinal holes in cases of retinal detachment (RD);
- It is used in cases of Regmatogenous RD.

Retinal toxicity

- Result of unsaturated hydrogen and carbon atoms;
- Progressive rupture of photoreceptors, narrowing of external plexiform layer, and presence of macrophages on pre-retinal surface.
- Significant damage when PFC remains in vitreous cavity for longer than five days or in a subretinal location.

Case study

Persistence of subretinal PFC for 23 days did not cause further impairment of patient's VA.

➤ REFERENCE

1. Pérez SMP, et al. Efficacy of the use of perfluorocarbon as a temporary tamponade agent in severe ocular trauma and/or complex retinopexy: a scoping review. *Int J Retina Vitreous*. 2024;18;10(1):6.
2. Ventura M, et al. Perfluorocetano líquido como tamponante vitreoretiniano de curta duração no pós-operatório de portadores de descolamento de retina por ruptura gigante. *Arq Bras Oftalmol*. 2007;70(3);495-500.

