

SHORT COMMUNICATIONS & CASE REPORTS

Optic disc pit maculopathy treated with vitrectomy, internal limiting membrane peeling, and gas tamponade: a report of two cases

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PURPOSE. *Two cases with optic disc pit associated maculopathy, treated with vitrectomy surgery, internal limiting membrane peeling (ILM) and gas tamponade, are presented.*

METHODS. *Interventional case reports.*

RESULTS. *Two patients with serous macular detachment associated with a congenital optic disc pit underwent vitrectomy surgery, induction of posterior vitreous detachment, peeling of the ILM, and gas tamponade. In both cases, complete resolution of intraretinal and subretinal fluid was observed within a few months after surgery. The retina remained attached during a follow-up of 12 months and the visual acuity of both patients improved.*

CONCLUSIONS. *Vitrectomy with ILM peeling and gas tamponade without any additional laser photocoagulation seems to be sufficient for the treatment of optic disc pit maculopathy. Further studies are required to evaluate the above findings, although the implementation of large-series studies remains a challenge due to the rarity of cases with optic disc maculopathy. (Eur J Ophthalmol 2009; 19: 324-6)*

KEY WORDS. *Optic disc pit, Retinal detachment, Vitrectomy*

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INTRODUCTION

Congenital pit of the optic disc is a rare congenital anomaly. Most patients with optic disc pit (ODP) have a concurrent serous detachment (RD) of the macula (1). Several treatment modalities have been proposed for the treatment of ODP maculopathy; however, their results have been variable (2, 3).

We report two cases with ODP associated maculopathy, treated with vitrectomy surgery, internal limiting membrane (ILM) peeling, and gas tamponade.

Case 1

A 41-year-old man presented with decreased vision in his left eye (LE). Best-corrected visual acuity (BCVA) was 20/120 LE. Funduscopy revealed a temporal ODP associated with intrareti-

nal and subretinal fluid (SRF) in the posterior pole (Fig. 1A).

A 20-gauge vitrectomy was performed with induction of posterior vitreous detachment (PVD) using the vitreous cutter to engage and pull on the peripapillary vitreous followed by trypan blue-assisted ILM peeling. Sulfur hexafluoride (SF₆) gas 20% was injected and the patient was instructed to keep prone for 7 days.

Four months postoperatively, the retina was attached and BCVA improved to 20/40 LE. At 1 year follow-up, BCVA further improved to 20/30 LE and the retina remained attached (Fig. 1, B and C).

Case 2

A 39-year-old man presented with RE blurred vision; BCVA was 20/200 RE. Funduscopy revealed a serous RD involving the macula linked to his ODP (RE) (Figs. 2 and 3A).

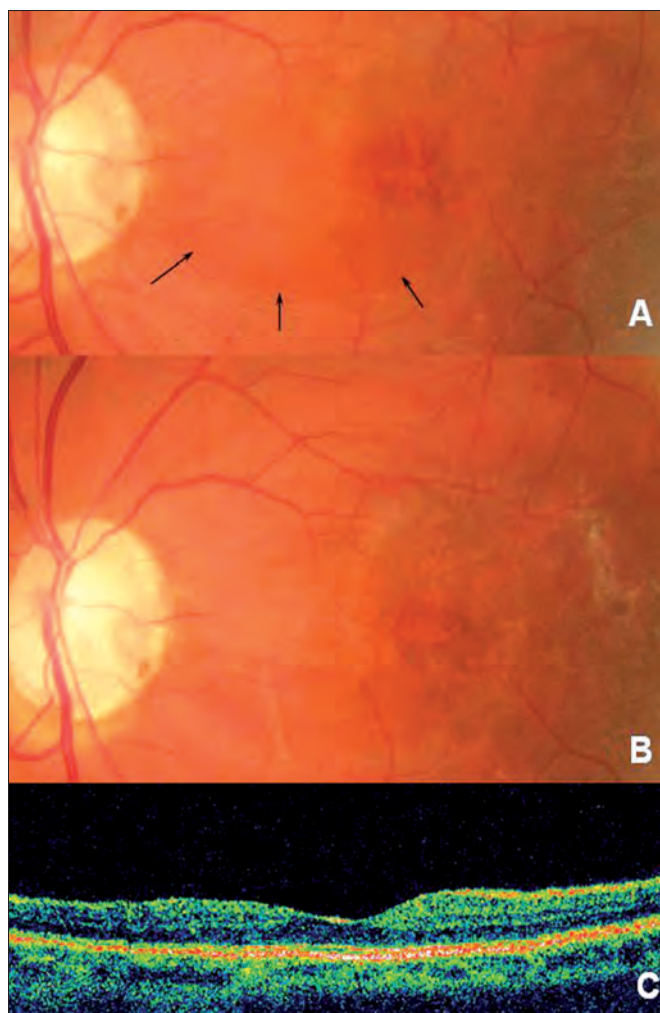


Fig. 1 - Case 1. (A) Fundus photograph of the left eye at presentation showing a macular detachment linked with a temporal optic disc pit. Twelve months after surgery, fundus photograph (B) and optical coherence tomography (C) of the left eye demonstrate absence of subretinal fluid.

A 25-gauge vitrectomy was performed with induction of PVD, using the vitreous cutter to engage and pull on the peripapillary vitreous followed by trypan blue-assisted ILM peeling. After fluid-air exchange, SF₆ 20% was used as tamponade and the patient was instructed to keep prone for 7 days.

Best-corrected visual acuity was 20/60 RE 2 months postoperatively (Fig. 3B); at 4 months after surgery BCVA was 20/30 RE (Fig. 3C) and 12 months postoperatively further improved to 20/25 RE and the SRF was completely absorbed (Fig. 3D).



Fig. 2 - Case 2. Fundus photograph of the right eye showing an inferotemporal optic disc pit associated with a large area of macular detachment (black arrows).

DISCUSSION

Optic disc pit is a rare congenital anomaly usually associated with macular serous RD (2). The origin of SRF remains unclear; however, most likely the fluid initially forms a schisis and subsequently enters the subretinal space to create a less extensive detachment of the outer retina (1). Several surgical treatment modalities have been described but their results are variable (2, 4-7). Release of traction seems a rational approach and several investigators have performed vitrectomy alone or with ILM peel, combined with laser photocoagulation in the peripapillary area (2, 3, 6).

We found only one case in the literature (4) of a 19-year-old patient who underwent vitrectomy with ILM peeling without any additional laser for the treatment of a macular detachment which did not extend to the optic disc in an eye with ODP (4).

In our cases we performed vitrectomy and induction of PVD followed by ILM peeling in order to completely eliminate any vitreoretinal traction in the macular area and facilitate the absorption of intraretinal and subretinal fluid. We decided not to perform laser photocoagulation; first so as to avoid any adverse effects of the laser treatment in papillomacular region; second as we thought that there is weak rationale on how laser photocoagulation would prevent the fluid transportation within the inner retinal layers of the macula.

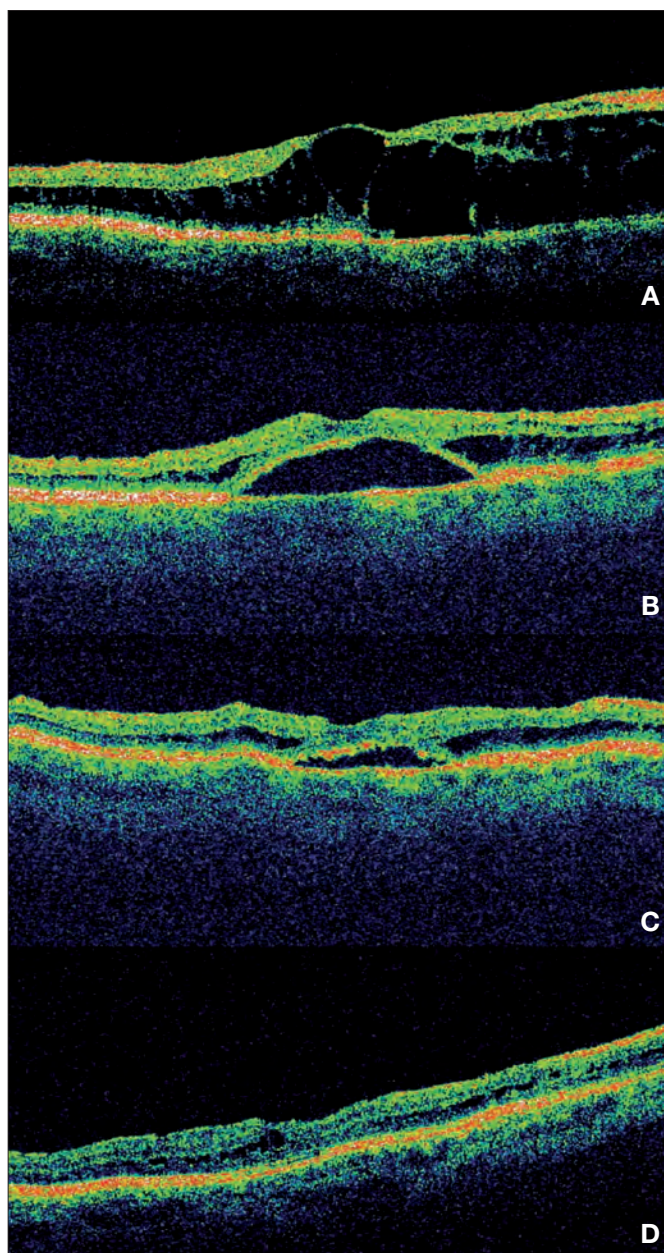


Fig. 3 - Case 2. (A) Optical coherence tomography (OCT) at presentation demonstrating intraretinal and subretinal fluid at the macula. (B), (C), (D) OCT 2, 4, and 12 months postoperatively, demonstrating gradual resolution, initially of the intraretinal and subsequently of the subretinal fluid.

In both our cases the SRF was absorbed soon after surgery and 12 months postoperatively BCVA improved, with absence of SRF on optical coherence tomography (Figs. 1C and 3D).

In conclusion, vitrectomy with ILM peeling and gas tam-

ponade without any additional laser photocoagulation seems to be sufficient for the treatment of ODP maculopathy. Further studies are required to evaluate the above findings, although the implementation of large series studies remains a challenge due to the rarity of cases with ODP maculopathy. Best treatment of this condition requires collaboration on a larger scale such as the clinical cases series database (see www.eumeda.net) held by the European Vitreoretinal Society.

The authors report no financial or proprietary interest.

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