Magno Ferreira, J Clin Exp Ophthalmol 2017, 8:1 (Suppl)
http://dx.doi.org/10.4172/2155-9570.C1.057

9th Global Ophthalmology Summit

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Treatment of Optic Disc Pit Associated Serous Macular Detachment: Case Reports

One sentence objective: Optic disc pit associated with serous retinal detachment is a rare condition and there is no "gold standard" to treat this disease. We are discussing few cases that were treated with PPV and gas.

Overview: In 1882, Wiethe described abnormalities in both optic discs in a 62-year-old woman. This most likely was the first report of Optic Disk Pits, OPD. Both men and women are equally affected by OPD and 10 to 15% are bilateral. Most are non-familial and there are few reports with an autosomal dominant pattern of inheritance. 70% occur on the temporal side of the disc, 20% centrally and 10% inferiorly, superiorly and nasally. Most are gray in color, although they varied from yellow to black. OPD's can be very small to large in size. Normally, a gray fibroglial membrane appears to overlie the pit in many cases. Cavities in the Optic Nerve Head appear as tilted discs, peripapillary staphyloma, morning glory disc anomaly, colobomas and congenital ODP. Associated retinal changes may occur. If the ODP is located centrally, it is less likely to be associated with retinal changes. An ODP along the rim of the optic disc are usually seen in association with peripapillary chorioretinal atrophy, RPE changes or SRD. There's a Posterior Vitreous Detachment in 50% of the cases of Serous Retinal Detachment, SRD, patients. The prevalent theory is that the associated sub-retinal and probably intraretinal fluid derives from liquefied vitreous that passes through the opening created by the ODP. Serous Retinal Detachment, SRD, most frequently occurs in early adulthood but can varied from six to 90 years of age. It has been discussed that the fluid from the vitreous enters through the ODP and actually travels between the inner and outer layers of the retina, which produces a retinal schisis (1-3). OCT, Optical Coherence Tomography, has shown inner retinal schisis preceding outer-layer detachment (4-6). SRD are generally low (less than 1.0 mm in height). The elevated retina often contains cystic regions within the inner nuclear layer. Occasionally, the cystic areas ruptured outward, producing a Lamellar Macular Hole, but, with intact ILM, Internal Limiting Membrane (4-6).

Purpose: The purpose of our paper is show the surgical treatment of ODP associated with SRD using PPV and gas. There is no "gold standard" to treat these patients and laser, gas or association has been reported. In the literature, the best option is PPV and gas, but few cases are reported and there is no evidence that the surgical treatment is the best option for these patients.

Methods: Four patients were diagnosed with ODP and serous retinal detachment, between November 2013 and October 2015. The patients were examined with indirect ophthalmoscopy, fundus photography and to confirm the diagnosis spectral domain OCT was done. The patients had done, before our examination, refraction and the BCVA was recorded. The patients were treated with pars plana vitrectomy, posterior hyaloid detachment, internal limiting membrane peeling, fluid air exchange, laser in the temporal side of the disc, and C3F8. All patients were oriented to maintained face down position for at least four days and were followed with OCT postoperative and refraction, at least three months after the surgery.

Results: All patients improved their vision. The patients remained with residual amount of fluid in the macula area during the follow-up but it was remarkable less than before surgery. The first patient (BEC, 16 years old) had vision of 20/800 and after six month the vision improved to 20/80 with some fluid in the macula, after almost two year. Another doctor submitted her to gas and laser, two months before surgery, without improvement. The second patient (EJS, 39 YO) improved his vision from 20/100 to 20/50. He had foveoschisis in the macula area with lamellar macular hole that improved to discreet schisis and resolution of the lamellar macular hole. The third patient (JAS, 42 YO) had 20/80 BCVA with foveoschisis that improved to 20/60 with only small cystic lesions in the macula. The fourth patient (CAS, 54 YO) had BCVA of 20/400 and improved to 20/60. The patient had SRD and foveoschisis that improved after 5 months, but some fluid and schisis still remains in the macula area.

Conclusions: The most widely accepted treatment for patients with ODP and SRD is a surgical approach involving PPV with or without ILM peeling, with or without endolaser photocoagulation and gas endotamponade (7-10). All patients treated in our reported cases had improved their vision, SRD or schisis associated. The limitation of this paper is the small number of patients and no control group

Biography

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