

Case Report

A Case of Subhyaloid Haemorrhage Managed with Nd:YAG Laser Hyaloidotomy

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Abstract:

Subhyaloid hemorrhage is rarely seen in ophthalmological practice in young males. We managed one such case in our set-up. A young male presented with sudden decreased vision. Fundus showed large collection of darkish red colored blood in subhyaloid space of the posterior pole in front of the macula, typical of sub-hyaloid hemorrhage. Treatment includes, amongst others, Nd: YAG laser hyaloidotomy. Prognosis, if treated on appropriate lines, is usually good. This case was being reported for general awareness.

Key-words: Nd: Yag laser hyaloidotomy, premacular sub-hyaloid haemorrhage

INTRODUCTION

Subhyaloid haemorrhage, also called preretinal hemorrhage is a collection of blood between the retina and posterior vitreous face. It is a rare entity. Various causes are trauma, Valsalva retinopathy, shaken baby syndrome and macroaneurysm. It is usually unilateral disorder. Clinical features and course depend upon the volume and causes of the hemorrhage. Symptoms include sudden painless loss of central vision with some spared peripheral vision. Fundus usually shows the boat-shaped hemorrhage obscuring the retina but can be circular due to massive bleed. In some eyes, blood becomes compacted in the posterior gel to form an 'ochre membrane'. Fundus fluorescein angiography may show presence of vascular anomaly. Smaller hemorrhages resolve spontaneously in a month or two but massive hemorrhages need active treatment which includes pars plana vitrectomy, tissue plasminogen activator and injection of perfluoropropane. Prognosis usually remains good in minor bleeds but may cause permanent visual loss in large cases 1-5.

Case report: A 32 years old male reported in CMH Hyderabad on 10th March 2012 with sudden, painless loss of vision in right eye of one week duration. He had a history of strenuous physical work few hours prior to the development of visual complaint. He was seen by the eye specialist. Vision in right eye was only perception of hand movements at 30 cm. Other general physical, systemic and ophthalmic parameters were normal. Fundus examination showed extensive Pre-retinal (subhyaloid) hemorrhage. It was about 7 disc diameter and upper border was beyond the superior temporal vascular arcade while lower border was within inferior

temporal arcade. He was investigated. His blood picture, platelet count, urine report, lipid profile, blood sugar, liver function tests, VDRL, RA factor and antinuclear factors were normal. He was referred to eye department PNS Shifa, a tertiary care hospital, by the eye specialist of CMH Hyderabad on 27th March 2012 for further management.

Fundus photographs taken in PNS Shifa on 28th March 2012 are shown in Fig.1. Nd:YAG laser posterior hyaloidotomy was done at the most dependant and most bulging part of lesion on the same day, using fundus contact lens, energy level of 1.2 mJ/pulse and spot size of 150 microns. 3 shots were sufficient to cause significant hole to drain the blood out. Short tapering course of systemic steroids was given, starting from Tablet Prednisolone

30 mg a day in divided dosage which completed in 2 weeks. Fundus photographs taken after 5 minutes, 20 minutes, and on 16th day (i.e., on 13th March 2012) are shown in Fig.2, 3 and 4 consecutively. Optical Coherence Tomography (OCT) showed separation of internal limiting membrane (ILM) from the retina (Fig.5.). Fundus fluorescein angiography was done and found to be inconclusive due to some blood along the superior temporal arcade. Vision was restored to 6/6 in right eye. Patient was given prophylactic Argon laser photocoagulation along the borders of the (previous) subhyaloid hemorrhage. He was discharged on 13th April 2012 with advice to avoid strenuous physical work in future and a regular follow up.

Discussion:

Our patient had extensive and a month long-standing Subhyaloid (preretinal) hemorrhage. Chances of auto-absorption without macular dysfunction were very less. So to avoid permanent damage to the macula, we resorted to the drainage of the blood through Nd: Yag laser hyaloidotomy, which is considered a safe procedure as compared to pars plana vitrectomy. Patient usually recovers quickly. We used only 3 shot of 1.2 mJ per pulse Nd:YAG Laser energy which was significantly less than that used by Durkan 5. The reason may be the use of different fundus contact lens or difference in expertise and precision. The Khadka investigated the effects of Nd: YAG Laser hyaloidotomy, having pre-macular hemorrhage in acute childhood leukemia and found good results in 9 out of 11 eyes^{6,7}. However our patient was young adult and not having any obvious

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systemic ailment. If started at an early stage, long-term result seemed to be very good. Our patient did not develop any complication so far. We would like to follow this case at least for 1 year.

Conclusion

Subhyaloid (preretinal) hemorrhage may be dealt according to the size, duration and etiology of the hemorrhage. Nd: YAG laser is a comparatively recent relevant therapeutic modality. Result of the treatment is fruitful if detected early and treated properly

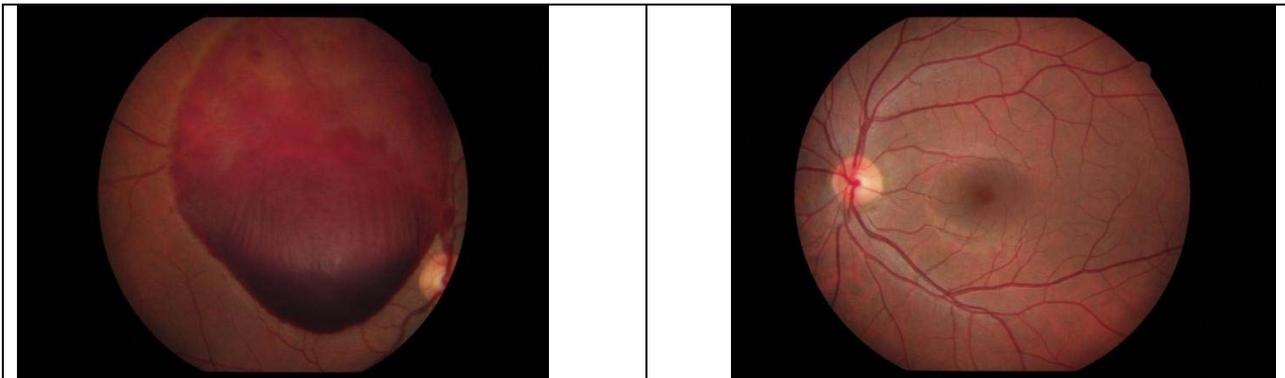


Fig.1. Photographs of fundi of the patient at the time of presentation on 28-03-1012: Rt showing extensive subhyaloid hemorrhage

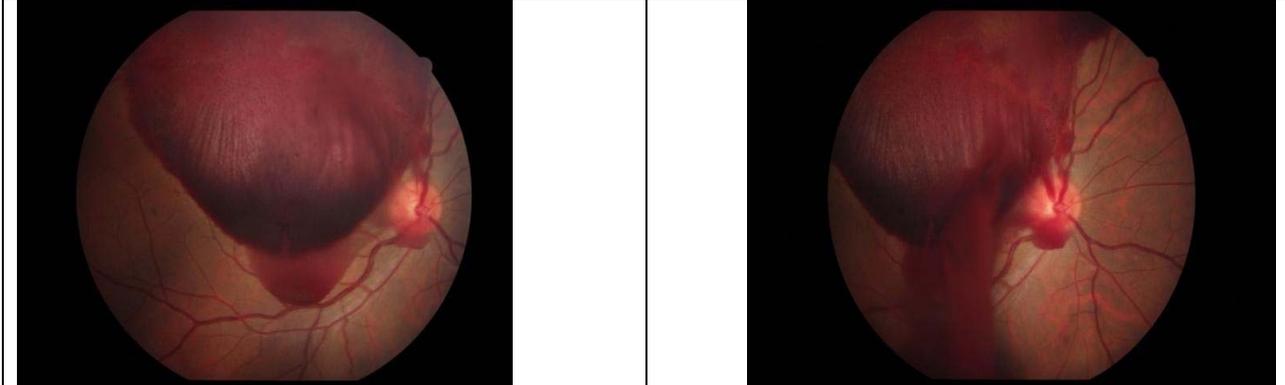


Fig.2. Photograph of Rt Fundus 5 minutes after Nd: YAG laser hyaloidotomy showing initial drainage of blood from subhyaloid space

Fig.3. Photograph of Rt Fundus 20 minutes after Nd: YAG laser hyaloidotomy showing more drainage of blood from subhyaloid space.

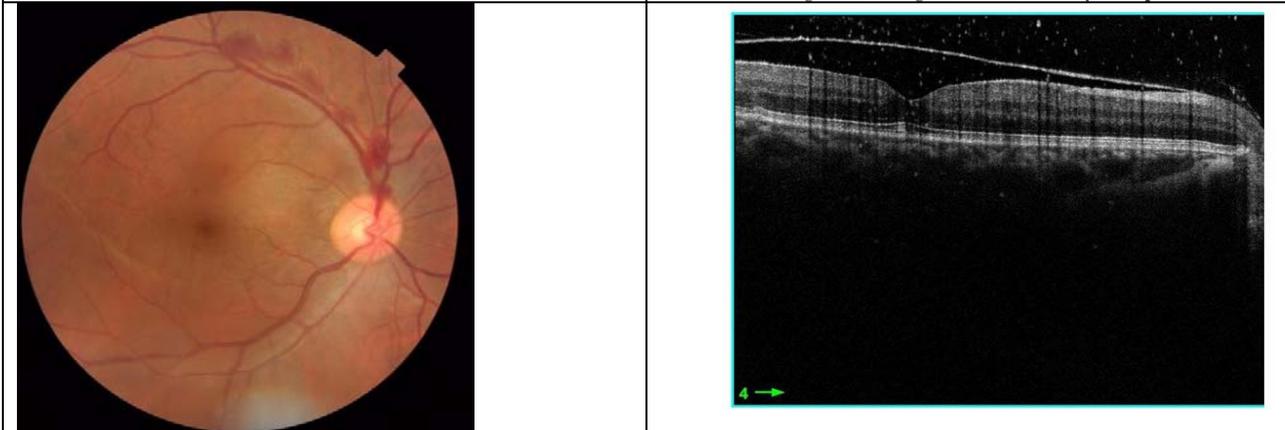


Fig.4. Photograph of Rt Fundus 16 days after Nd: YAG laser hyaloidotomy showing almost complete clearing of blood from subhyaloid space and restoration of vision to 6/6.

Fig.5. OCT of Rt Fundus 16 days after Nd: YAG laser hyaloidotomy showing separation / detachment of ILM.

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