e - ISSN - 2349 - 8005

INTERNATIONAL JOURNAL OF ADVANCES IN CASE REPORTS

Journal homepage: www.mcmed.us/journal/ijacr

RARE REPORT OF COMPLETE VISUAL RECOVERY IN A LONG STANDING CASE OF RETRO-BULBAR OPTIC NEURITIS

Indranil Saha*, Indrani Rath and Sumita Mohapatra

Department of Ophthalmology (RIO), SCB Medical College, Cuttack, Odisha, India.

Corresponding Author:- **Indranil Saha**
E-mail: indranil124saha@yahoo.co.in

Article Info
Received 15/07/2015
Revised 27/08/2015
Accepted 02/09/2015

Key words: Optic neuritis, Corticosteroids.

ABSTRACT
Optic neuritis presents with sudden onset of visual loss, usually affecting young adults and is characterized by inflammation of the optic nerve. Most cases are idiopathic while others can be a part of demyelinating disorders Hyperacute treatment with pulse dose of corticosteroids has always been mentioned in literature, to restore near normal vision. The present paper highlights the importance of therapeutic corticosteroids in a patient with Optic neuritis and we strongly advocate high dose corticosteroids as a sight saving measure in cases of optic neuritis even if the diagnosis is delayed.

INTRODUCTION

Optic neuritis is an inflammatory condition affecting the optic nerve, usually affecting young adults, especially females, between 18 and 45 years of age. The condition is characterized by a sudden onset of unilateral or bilateral visual loss [8]. Most of the cases are idiopathic in nature; however, it could be associated with demyelinating lesions, of which multiple sclerosis (MS) is the most common cause, though incidence of MS in India & other Asian countries is low [11].

Other less common etiologies include infectious and para-infectious causes, inflammatory and para vaccination immunological responses [3]. Optic Neuritis Treatment Trial (ONTT) was the first major study that provided information on the natural history, role of steroids in treatment and risk of development of MS [9]. Subsequently, numerous clinical trials have evaluated different modalities of management of optic neuritis and MS.

The mainstay of Optic neuritis treatment remains to treat with pulse dose of corticosteroids during the hyper-acute phase, to ensure good visual prognosis. We present here a case of Optic neuritis where in-spite of the condition being there for more than a month, normal vision was restored with pulse dose corticosteroids.

Case Report

16 years old boy, presented with loss of vision in the left eye for 1 month. He was apparently well, when 1 month ago he initially had low grade fever, which resolved within a week by using antipyretics. Following which, he noticed gross diminution of vision in the left eye and he could appreciate objects only close to his face. The symptom progressed to total loss of functional vision within a few days. He sought native medicine for the same for 1 month with no relief. When evaluated at our center, he was alert, with stable vitals and a normal systemic examination.

Examination of the right eye was within normal limits. In the left eye there was a grade 4 RAPD, with a relatively normal anterior and posterior segment (Figure 1), ocular movements were full and painless. T2 weighted MRI brain showed optic nerve enhancement on the left side (Figure 2), the rest of the imaging was unremarkable. He was diagnosed as retrobulbar Optic neuritis and after the baseline investigations were cleared he was initiated on 1g intravenous methyl-prednisolone once daily for 5 days, under close observation. He tolerated the treatment well and on the 3rd day of the treatment his vision in the affected eye improved to 20/80 and by the 5th day it was almost

20/20 with a normally reacting pupil. He was discharged with tapering doses of oral prednisolone and methylcobalamin. 3 months follow up period has been uneventful and he has unaided 20/20 vision in both eyes.

Figure 1. Fundus Picture of Both eyes showing bilateral absoloutely normal fundi

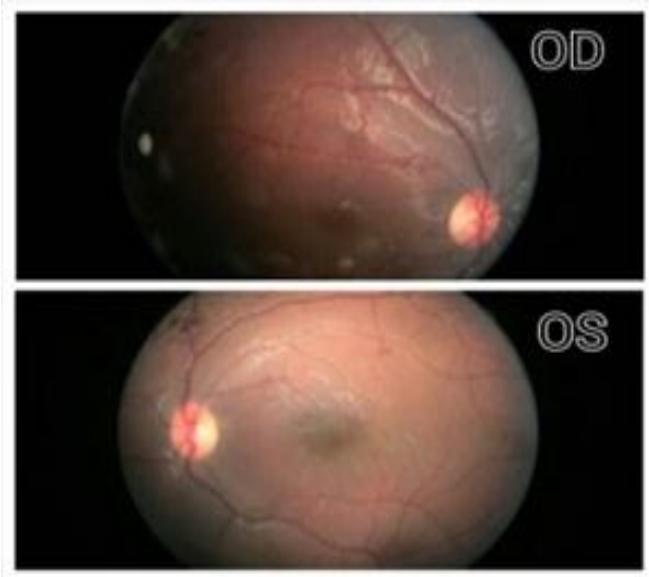
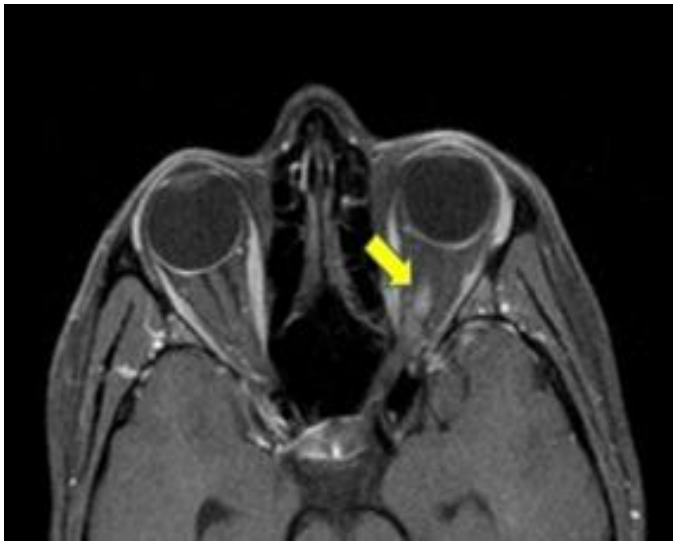


Figure 2. Axial post contrast T1 weighted MRI Brain showing Optic Nerve enhancement (yellow arrow) on the Left side



DISCUSSION AND CONCLUSION

Optic neuritis is one of the most common cause of acute reversible vision loss and is second only to glaucoma as the most common acquired cause of optic nerve disorders in younger population less than 50 years of age [1]. In some patients, the clinical phenotype is similar but others follow a very different clinical course [2]. Pain in the distribution of the first division of the trigeminal nerve and pain on eye movement are often reported by patients with acute optic neuritis Lepore [4] suggested that pain on eye movement in optic neuritis occurs because of the close association of the optic nerve sheath and the sheaths of the superior and inferior recti at the orbital apex. This is in contrast to certain studies from Africa and also the ONTT study [9] where pain was present in only 7.8 % cases, similar to ours where pain wasn't even a presenting feature. Pulse corticosteroid therapy in the acute phase of this disease, in order to suppress the inflammatory pathology, has always been advocated in literature with promising results.

Mahashweta Dutt et al showed that early treatment with corticosteroids, significantly suppressed the development of experimental optic neuritis and preserved RGCs in the relapsing/remitting model of MS in these studies [12]. G.T Plant et al in their case series of Optic neuritis emphasized the urgency to reduce the inflammation of optic neuritis to ensure near complete vision recovery [1]. Certain studies from Asia [6,7] and Africa [10] have shown an overall poorer visual outcome compared to the ONTT population which showed good visual prognosis i.e. 20/40 or better in 93.3% cases [9]. Rohit Saxena et al showed a good visual recovery in 64% of their cases [8]. The highlight of our report is that even though the patient presented after more than a month, with retrobulbar optic neuritis, pulse corticosteroid therapy restored his vision. We would like to emphasize that no such cases should be written off on the presumption of poor prognosis, and every patient deserves a trial of standard treatment. Restoration of normal vision with such a long duration of optic neuritis hasn't been mentioned in any literature to the best of our knowledge.

ACKNOWLEDGEMENT

We express our immense gratitude to all the patients and their family members who participated in this study without whom this endeavor would not have been possible. The authors thank all the staff members of Departments of Ophthalmology, Neurosurgery, Pathology and Radiology of SCB Medical College, Cuttack for their guidance and support. The authors would also like to thank all the authors/editors/ publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

CONFLICT OF INTEREST: NIL

REFERENCES

1. GT Plant et al. (2011). Hyperacute Corticosteroid treatment of Optic Neuritis at the Onset of Pain may prevent Visual loss, A Case Series, *Mult Scler Int*, 2011, 815068.

2. Kidd D, Burton B, Plant GT, Graham EM. (2003). Chronic relapsing inflammatory optic neuropathy (CRION) *Brain*, 126(2), 276–284
3. Vimla Menon et al. (2011). Management of Optic Neuritis, *Indian J Ophthalmol*, 59(2), 117-122
4. Lepore FE. (1991). Determinants of Pain in 101 Eyes with Optic Neuritis. *Archives of Neurology*, 48(7), 748–749.
5. Beck RW et al, Cleary PA, Backlund JC. (1994). The course of Visual recovery after optic neuritis. Experience of Optic Neuritis Treatment Trial. *Ophthalmology*, 101, 1771-8
6. Wang JC, Tow S, Aung T, Lim SA, Cullen JF. (2001). The Presentation, aetiology, management and outcome of Optic Neuritis in an Asian population, *Clin Experiment Ophthalmol*, 29, 312-5
7. Lim SA, Goh KY, Tow S, Fu E, Wong TY, Seah A, et al. (2008). Optic Neuritis in Singapore, *Singapore Med J*, 49, 667-71
8. Saxena Rohit et al. (2014). Clinical Profile and short term outcomes of Optic neuritis patients in India. *Indian J Ophthalmol*, 62, 265-7
9. The Optic Neuritis Study Group. (1991). The Clinical profile of Optic neuritis. Experience of the Optic Neuritis Treatment Trial. *Arch Ophthalmol*, 109, 1673-6
10. Pokroy R, Modi G, Saffer D. (2001). Optic Neuritis in urban black African community. *Eye (Lond)*, 15, 469-73
11. Singhal BS. (1985). Multiple sclerosis, Indian experience. *Ann Acad Med Singapore*, 14, 32-6.
12. Mahashweta Dutt, Philomela Tabuena, Elvira Ventura, Abdolmohamad Rostami and Kenneth S. Shindler. (2010). Timing of Corticosteroid Therapy Is Critical to Prevent Retinal Ganglion Cell Loss in Experimental Optic Neuritis. *Invest Ophthalmol Vis Sci*, 51(3), 1439–1445.