

ORIGINAL RESEARCH

A Study Of Clinical Profile And Visual Outcomes In Patients With Optic Neuritis At A Tertiary Care Centre Of Northern India

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ABSTRACT

Background: Optic neuritis causes substantial visual impairment and potential long-term visual defects in addition to serving as an important prognostic indicator for future development of demyelinating diseases such as multiple sclerosis. So, an ophthalmologist has a very significant role to aid in prevention of full blown MS. Fortunately, in most cases, optic neuritis recovers either spontaneously or with treatment. Recovery can be partial or absolute, depending largely upon severity and co-existing conditions.

Aim: To study the clinical profile and visual outcomes in patients with optic neuritis.

Material and methods: A prospective observational study was conducted in the Department of ophthalmology, MMIMSR Mullana, Ambala for which approval was obtained from the ethical committee of the institution. Patients of ON were included in the study after obtaining informed consent. Total 60 cases were studied. Analysis was done using SPSS and Pohnpei software.

Results: The mean age of presentation was 39.3667 ± 14.03563 . ranging from 16 to 75 years. Out of 60 patients, retrobulbar neuritis was diagnosed in 34 [56.7%] whereas papillitis was diagnosed in 26[43.3%]. After ONTT all patients showed improvement in vision. This improvement in vision is statistically significant.

Conclusion: The results revealed that the prevalence of papillitis and RBN were almost equal. Patients with RBN responded quickly to ONTT regimen while papillitis recovered late. VA improvement after ONTT was statistically significant. Colour vision and contrast also improved. Our study showed that ONTT regimen has a benefit in optic neuritis with fast visual recovery.

Key words: ONTT, vision, optic neuritis.

INTRODUCTION

Optic neuritis is the inflammation of the optic nerve. It can occur secondary to autoimmune, infectious, or inflammatory disorders and is strongly associated with Multiple sclerosis (MS). It is the presenting symptom in 15-20% of cases of MS, but frequently occurs in the absence of MS. In addition, 65% of patients with multiple sclerosis will suffer from optic neuritis at some point during the course of the disease. In developing countries like India, the clinical profile of optic neuritis is somewhat different. Not many studies have been done on optic

neuritis. A few studies clarify that the scenario in Indian subcontinent is different as infectious diseases play an important role in causation of optic neuritis and prognosis is not so good. Hence this study will focus on likely causative factor, risk and visual outcome of optic neuritis in Indian set up.

AIM

To study the clinical profile and visual outcomes in patients with optic neuritis.

MATERIAL AND METHODS

A prospective observational study was conducted at the Department of ophthalmology, MMIMSR, Mullana, Ambala for which approval was obtained from the ethical committee of the institution. Patients of ON were included in the study after obtaining informed consent.

ON was diagnosed on the basis of history and clinical examination, which included:

- sudden unilateral or bilateral visual loss of less than 4 weeks duration,
- presence of relative afferent pupillary defect,
- dyschromatopsia, and
- normal or swollen optic disc on fundus examination.

INCLUSION CRITERIA

- Age group of >18year
- Both gender (Male and Female)
- Patients with diagnosis of ON

EXCLUSION CRITERIA

- Other optic neuropathies, such as ischemic, infective, traumatic, toxic, hereditary, and compressive, were excluded from the study.
- Patients under the age of 18 were excluded from the study.
- Patients not willing to participate in the study.

ANALYSIS

Data was collected and compiled on Microsoft Excel spreadsheets and analysed using SPSS 20.0 software and Pohnpei version 2.3.1.

RESULTS

Figure 1: Occurrence of type of optic neuritis.

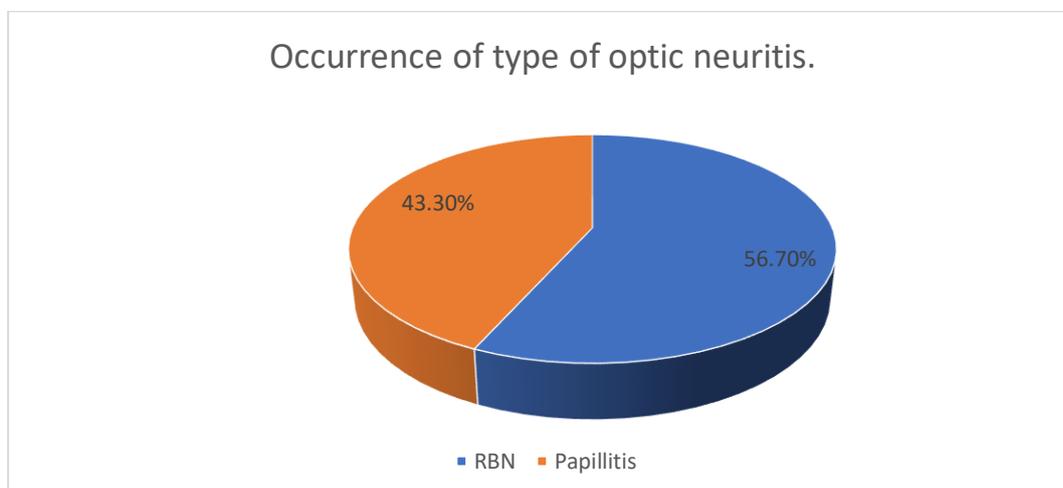
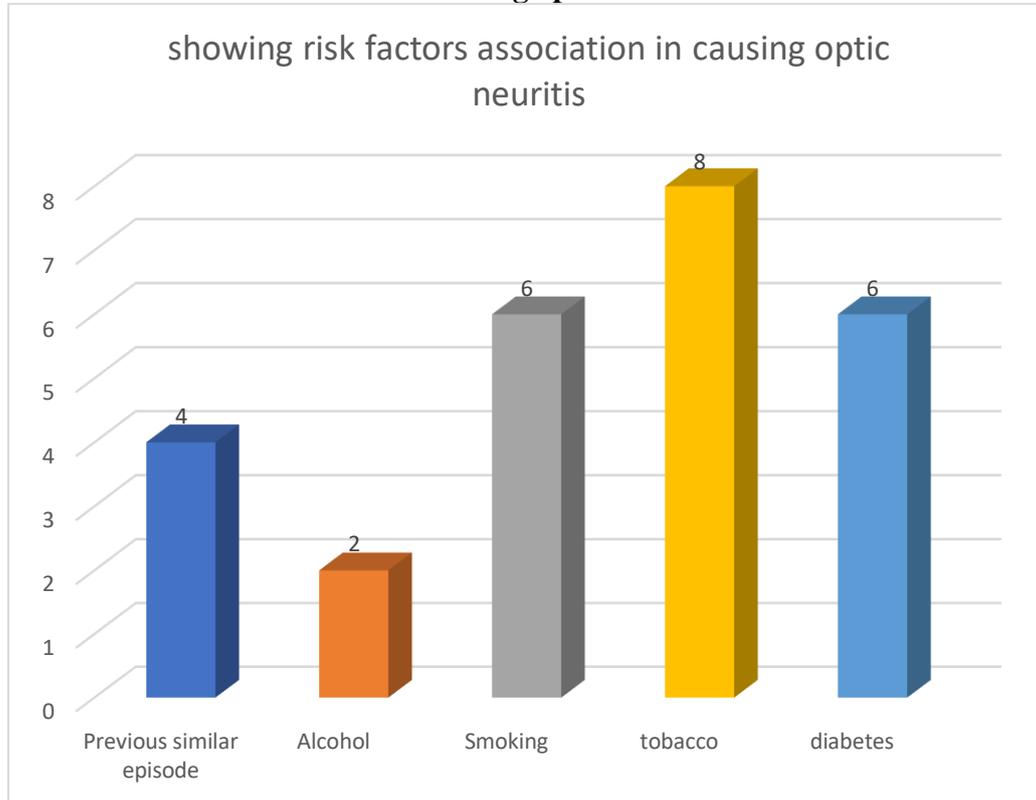


Table no 1: Showing involvement of type of optic neuritis among males and females.

Type	Male	Female	Total
RBN	6	28	34
papillitis	16	10	26
total	22	38	60

Figure 2: Risk factors association in causing opticneuritis**Table No 2 Showing Various Complaints By Patients**

Complaints	RBN	Papillitis
DOV	34	26
pain	22	12
loss of field	0	0
photopsia	0	0
Uthoff's phenomenon	2	0

Table no 3 showing pupillary reaction comparison beforeand after treatment.

Parameter	Presentation	1 week	1 month	3 months
Normal	0%	63.33%	76.66%	80%
RAPD	76.66%	20%	10%	6.66%
Sluggish	23.33%	16.66%	13.33%	13.33%

Figure 3: visual acuity comparison before and after treatment

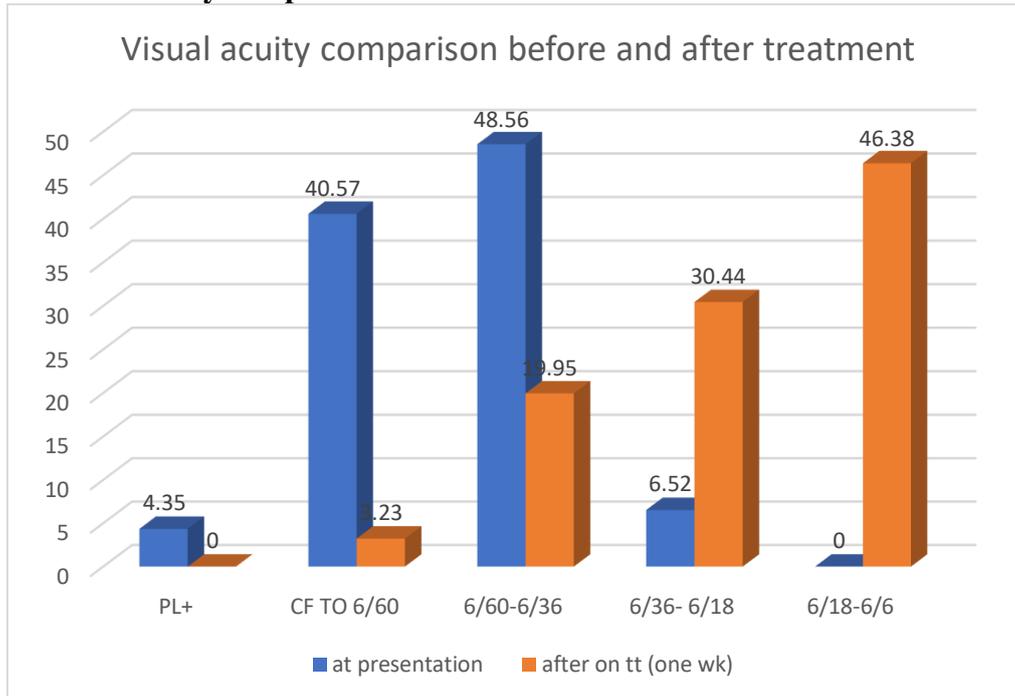


Table 4: Above showing visual outcome after 1month and 3month of ONTT regimen.

	On Follow Up	
	1 Month	3 Months
Pl+	-	-
Cf To 6/60	3.23	3.23
6/60-6/36	11.62	4.72
6/36-6/18	28.65	27.91
6/18-6/6	60.52	64.16
P Value	0.006*	0.002*

*based on chi square test, *significant at p value < 0.05

Figure 4: colour vision comparison before and after treatment.

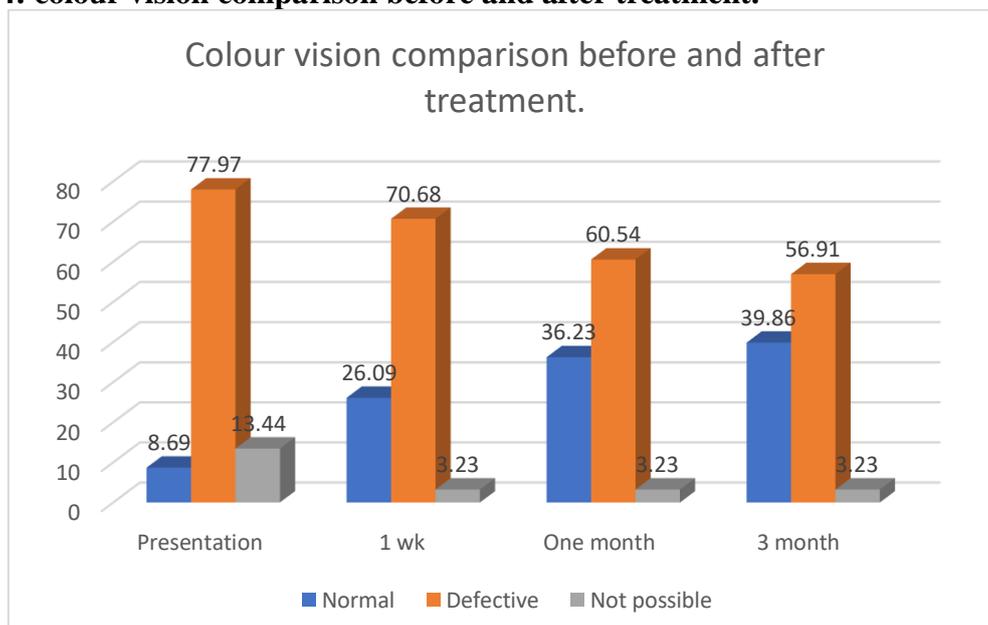
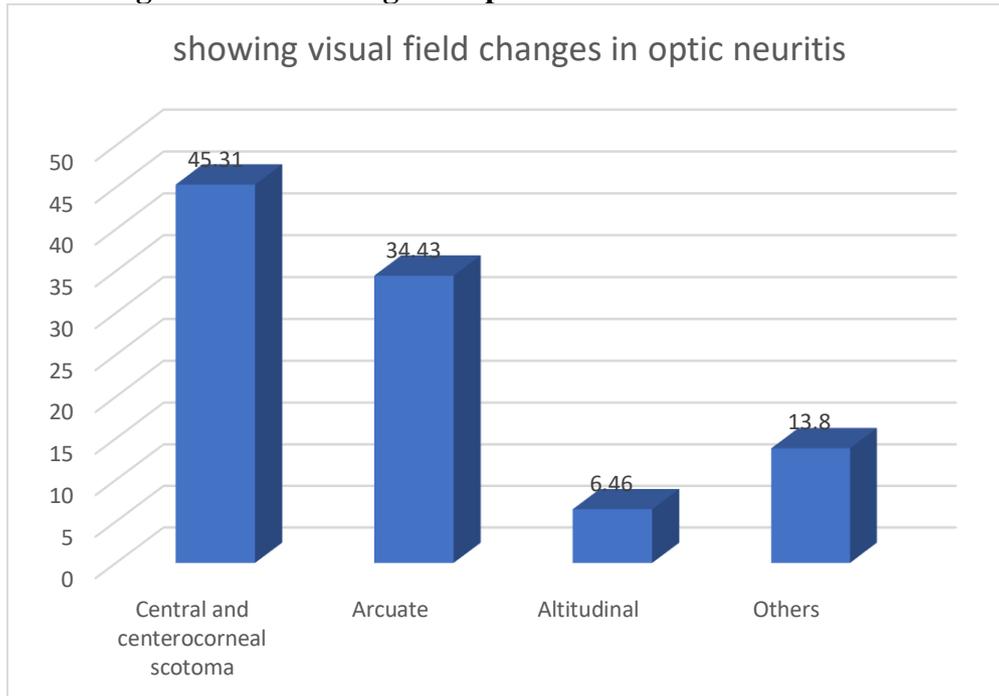


Figure 5: showing visual field changes in optic neuritis

DISCUSSION

In present study the mean age of presentation was 39.3667 ± 14.03563 , ranging from 16 to 75 years. Out of 60 patients retrobulbar neuritis was diagnosed in 34 [56.7%] whereas papillitis was diagnosed in 26 [43.3%]. The age of presentation and female preponderance noted in the present study was similar to that reported by the ONTT and other studies conducted by Wakakura M et al and Wang JC [1, 2]. Bilateral presentation was seen in 23.33% of the patients in the present study and compares to 16%-35% reported in other studies from this region conducted by Woung LC et al and Lim SA et al [3, 4], whereas an African study conducted by Pokroy R et al [5] has reported it to be as high as 80%.

Involvement of the fellow eyes was suspected in 6.66% of unilateral cases in the form of decreased contrast sensitivity, although no defect in colour vision or visual field was noted. Recurrence was seen in 2 cases i.e 6.66% and was more common with RBN. The ONTT has reported an overall risk of recurrence to be 28% at 5 years follow-up and was more frequent in their MS group and in patients without MS who were in the oral prednisolone treatment group [6]. This concordance may be due to small sample size and brief study duration in the present study.

However, in the present study only 64.16% of the patients could recover VA to this level. The amount of visual recovery was similar in unilateral and bilateral cases (58% versus 57.6% gaining VA of 6/12 or more). This result is comparable to an Indian study done earlier by Jain IS et al [7]. Idiopathic ON and ON associated with MS are considered to have good visual prognosis. As per a report of the ONTT around 93.3% of patients recovered VA of 6/12 or better [8].

CONCLUSION

Study was prospective and was conducted at the Department of Ophthalmology, MMIMSR, Mullana Ambala for over a period of 1 year. The study was done on 60 patients who were clinically diagnosed to have optic neuritis. Para infectious and post infectious and in patients who were contraindicated for iv steroids were excluded. All patients were evaluated - VA,

pupil examination, colour vision, contrast sensitivity, VF and fundus were evaluated thoroughly.

All patients were treated with ONTT trial and also investigated for cause and follow up done. The results revealed that the prevalence of papillitis and RBN were almost equal. Patients with RBN responded quickly to ONTT regimen while papillitis recovered late. VA improvement after ONTT was statistically significant. colour vision and contrast also improved.

Our study showed that ONTT regimen has a benefit in optic neuritis with fast visual recovery.

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