Comment on Linezolid induced optic neuropathy

Dear Editor,

We read with interest the article. Linezolid-induced optic neuropathy by Karuppannasamy *et al*.[1] We congratulate the authors on highlighting a very important ocular complication due to a drug used for multi-drug resistant (MDR) tuberculosis (TB) - a condition which is becoming fairly common in our country.

We also encountered a similar case in our practice recently, and we would like to highlight the similarities and differences in the two cases.

Our patient was a 30-year-old male who was on treatment for MDR chest TB for the last 9 months with linezolid (600 mg/day), kanamycin 750 mg/day, injection streptomycin and (other drugs).

He presented with blurred vision in both eyes for the last 1 month. His vision was counting fingers at 3 m, <N36 and 20/80, N18 in the right and left eye, respectively. Anterior segment examination showed no abnormality, and there was no relative afferent pupil defect. Fundus examination was normal. Color vision was grossly abnormal with Ishiharas charts. There was no disc edema.

He was under treatment for peripheral neuropathy for the last 2 months (surprisingly linezolid was not stopped – even by the neurologist). He had significant gait abnormalities and sensory ataxia.

Perimetry showed generalized field loss in right eye with a prominent field loss superiorly [Fig. 1]. Reliability was poor. Left eye perimetry showed a superior field loss also involving the center [Fig. 2]. The field defects are very similar to the ones reported by the authors. Are we seeing a pattern to the field loss due to linezolid? Toxic neuritis usually results in central or centro cecal field defects.[2] Is it possible that linezolid induced toxic neuritis produces superior field defects in addition to central or centro cecal defects?

Linezolid was stopped. The vision gradually improved to 20/80, N18 and 20/30, N8 in 3 months. Perimetry also showed

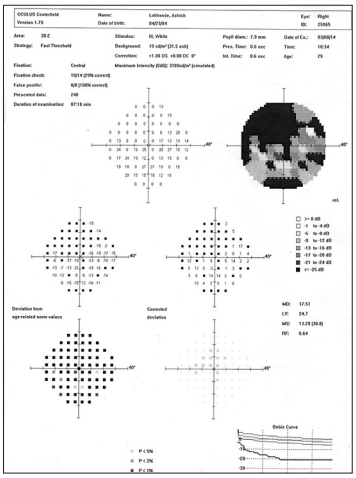

Figure 1: Right eye perimetry

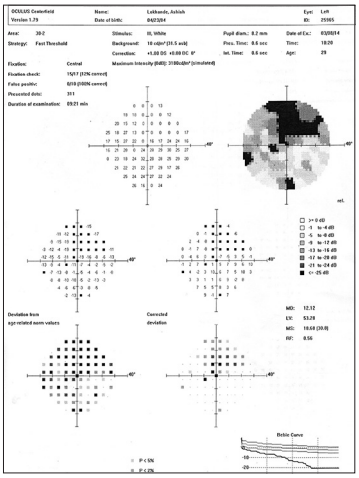

Figure 2: Left eye perimetry

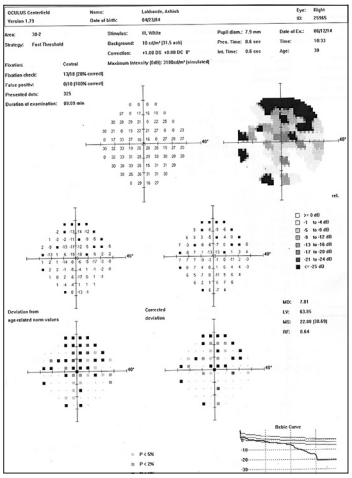

Figure 3: Right eye perimetry 3 months after stopping linezolid

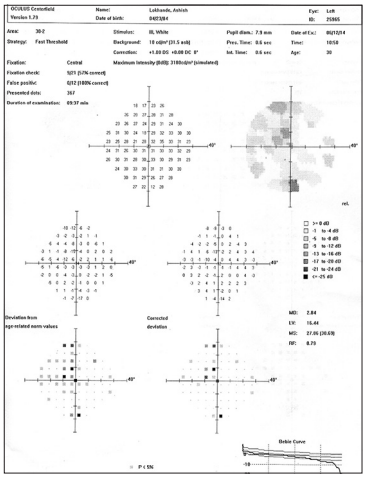

Figure 4: Left eye perimetry 3 months after stopping linezolid

dramatic improvement (as shown by the authors) but similar to their case – superior defects remained [Figs. 3 and 4].

Surprisingly – there was a dramatic improvement in the peripheral neuropathy as well. There was a marked improvement in the gait and sensory ataxia, which is quite contrary to the reports in the literature.[3]

Comparing the two cases – both showed striking similarities in superior field defects, which improved dramatically after stopping the drug, but the superior defects persisted even at 3 months follow-up. This leads us to hypothesize that linezolid induced optic neuropathy produces superior field defects besides central ones although several more cases will have to be studied.

Our patient showed improvement in peripheral neuropathy, which is contrary to what has been reported in literature, which encourages us to state that peripheral neuropathy, just like optic neuropathy is reversible – though at varying levels, which is not surprising as the cause of the two condition is one and the same.[4]

Patel Chaitali, Ramchandani Suresh[1]

Department of Ophthalmology, MGM Medical College, Kamothe, [1]Shivam Eye Hospital, Nerul, Navi Mumbai, Maharashtra, India

Correspondence to: Dr. Chaitali Patel,
Department of Ophthalmology, MGM Medical College
501, Pranashish, Above Central Bank, 7 Bungalows, Versova,
Andheri West, Mumbai - 400 061, Maharashtra, India.
E-mail: drchaitali22@gmail.com

References

1. Karuppannasamy D, Raghuram A, Sundar D. Linezolid-induced optic neuropathy. Indian J Ophthalmol 2014;62:497-500.
2. Narita M, Tsuji BT, Yu VL. Linezolid-associated peripheral and optic neuropathy, lactic acidosis, and serotonin syndrome. Pharmacotherapy 2007;27:1189-97.
3. Bressler AM, Zimmer SM, Gilmore JL, Somani J. Peripheral neuropathy associated with prolonged use of linezolid. Lancet Infect Dis 2004;4:528-31.
4. Saijo T, Hayashi K, Yamada H, Wakakura M. Linezolid-induced optic neuropathy. Am J Ophthalmol 2005;139:1114-6.

Access this article online

Quick Response Code:

Website: www.ijo.in

DOI: 10.4103/0301-4738.151484