Bilateral retrobulbar optic neuritis: A rare ocular manifestation of sarcoidosis

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Introduction

Sarcoidosis is a systemic inflammatory disorder of unknown etiology, characterized by non-caseating granulomas that can involve multiple organs, including the eye. While uveitis is the most common ocular manifestation, optic neuropathy, particularly bilateral retrobulbar optic neuritis, is rare but potentially sight-threatening, carrying a high risk of significant visual loss. Early recognition is essential to prevent potential complications and guide appropriate management..

Observation

We report the case of a 57-year-old patient with a known history of sarcoidosis and a recent episode of pulmonary involvement presented with sudden blurred vision in the left eye (LE) for 1 day. Visual acuity (VA) in the right eye (RE) was 10/10, and ophthalmologic examination was unremarkable. In the LE, VA was 7/10, the afferent pupillary reflex was sluggish, anterior segment, vitreous, and fundus examinations showed no abnormalities. Fluorescein angiography (FA) of both eyes revealed a normal optic disc **(figure 1)**. Macular and optic nerve optical coherence tomography (OCT) were normal in both eyes **(figure 2)**. An urgent visual evoked potential (VEP) test confirmed left retrobulbar optic neuropathy **(figure 3).** Magnetic resonance imaging (MRI) was normal. The diagnosis of left retrobulbar optic neuritis associated with sarcoidosis was established. The patient received three intravenous pulses of methylprednisolone, followed by oral prednisone at 1 mg/kg/day. After 5 days of treatment, the patient reported blurred vision in the RE. Examination revealed VA of 5/10 in the RE and 7/10 in the LE, with a normal fundus in both eyes. VEP testing confirmed bilateral retrobulbar optic neuropathy, indicating progression to bilateral involvement **(figure 3).** Corticosteroid therapy was continued with gradual tapering, resulting in full visual recovery (10/10 in both eyes) after two months.

Discussion and conclusion

Bilateral retrobulbar optic neuritis is a rare but serious manifestation of sarcoidosis that may threaten visual prognosis. Early diagnosis, based on clinical examination, VEP, and multimodal imaging, is essential to identify optic nerve involvement and exclude other causes of visual loss. Prompt treatment with systemic corticosteroids can lead to complete visual recovery and prevent permanent optic nerve damage. This case highlights the importance of considering neurosarcoidosis in patients with sarcoidosis presenting with acute visual impairment and underscores the value of rapid multidisciplinary management.

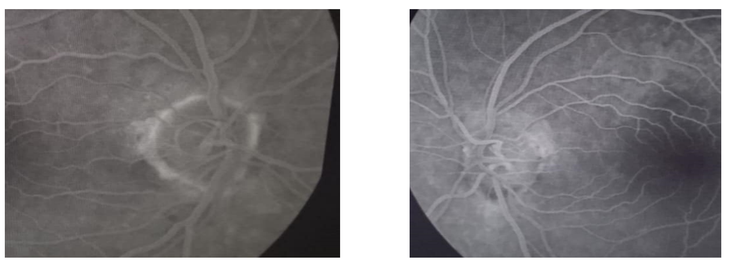

Figure 1: Fluorescein retinal angiography revealed normal optic disc.

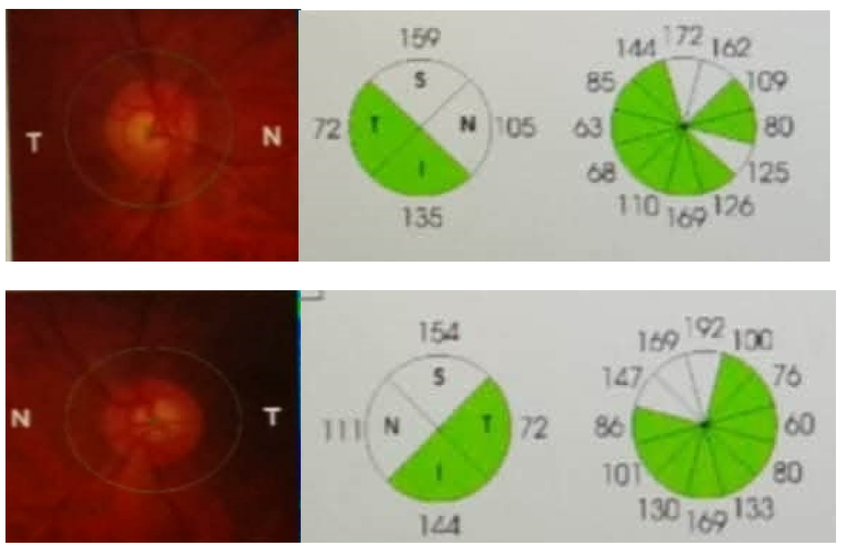

Figure 2: optic nerve OCT showed no abnormalities in both eyes.

	N75 ms	P100 ms	N145 ms
Initially			
RE	84	100	117
LE	89	105	136
After corticotherapy			
RE	87	108	138
LE	92	114	151

Figure 3: Baseline VEPs showed initially mild latency prolongation in the left eye, with normal findings in the right eye. After 5 days of corticosteroid therapy, follow-up VEPs demonstrated bilateral involvement, confirming the diagnosis of acute bilateral optic neuritis.

References

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