

## Diagnostic Pearls in Case of Optic Nerve Sheath Meningioma

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### Abstract

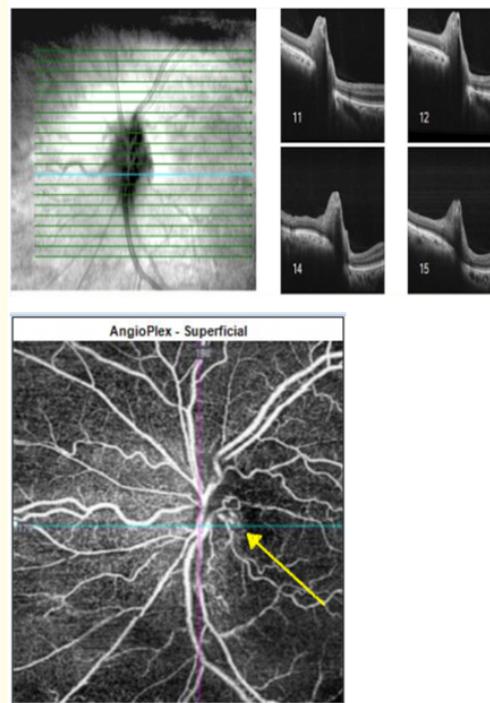
Optic nerve sheath meningioma (ONSM) is a rare, slow growing, benign tumour originating from the meningotheelial cells of the meninges surrounding the optic nerve. They usually cause slowly progressive vision loss, due to their detrimental effect on the blood supply of the optic nerve. Seldom reports in literature vividly describe the diagnostic signs in such cases. We hereby report a case of a 51 year old female patient diagnosed with ONSM with the help of clinical and radiological evidence.

ONSM are rare, slow progressing benign lesions arising either from the meningeal covering of optic nerve or can extent from primary intracranial tumour [1,2].

**Keywords:** Optic Nerve Sheath Meningioma (ONSM); Right Eye (RE); Left Eye (LE)

### Case Description

A 51 year old female patient presented with complaints of diminution of vision in the left eye, which has slowly worsened over the past year. On examination, her best corrected visual acuity in the right eye (RE) was 20/40 and in the left eye (LE) was 20/800, with a relative afferent pupillary defect noted in the left eye. On fundus examination, LE (Figure 1) had a pale optic disc with blurred margins and the presence of tortuous vessels resembling opto-ciliary shunts temporal to the disc.



**Figure 1**

SD-OCT (LE) (Figure 2a) scan taken over the optic nerve head showed a grossly elevated disc (yellow arrow). OCT-A (Figure 2b) scan of the peripapillary retina revealed a rarefaction of the microvascular network with a significant reduction of the vessel density with tortuous vessels at the temporal margins, clinically correlating with the opto-ciliary shunt vessels (yellow arrow).

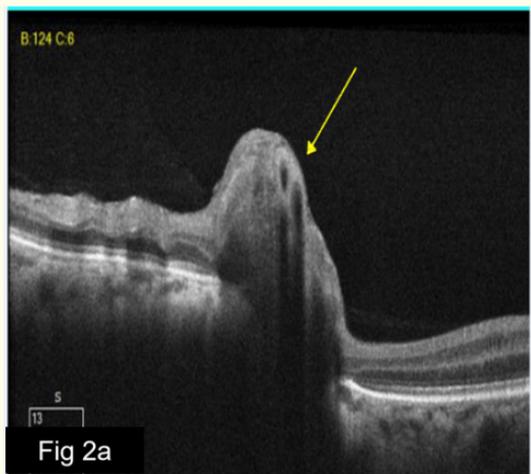


Figure 2a

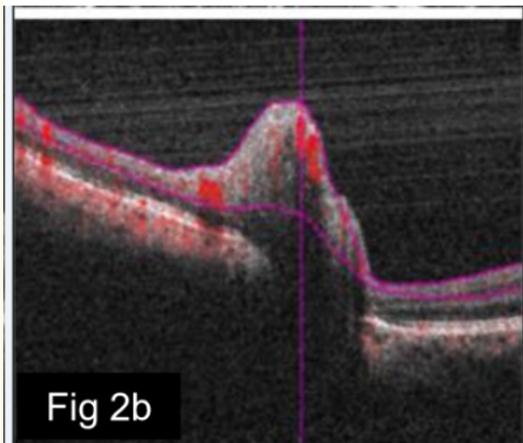


Figure 2a and 2b

The MRI scan revealed a bulky left optic nerve with a torturous course in the intraorbital region. It shows increased signal intensity on T2W (Figure 3) and flair sequences and a typical tram-track appearance on axial scan (yellow arrow). There was an associated intracranial extension of the lesion involving the frontal cortex.

**Discussion**

Patients with ONSM present with classical triad of slow progressive vision loss, optic nerve atrophy and opto-ciliary shunt vessels.



Figure 3

Opto-ciliary shunt vessels represents compressive effect of tumour on venous circulation of the optic nerve, and can be well visually non-invasively on OCT-A. These tumours are usually non-fatal, but can severely affect visual function. Hence, they should be closely monitored for growth and intracranial extension [3,4].

**Patient Consent**

Taken.

**Financial Interest**

Nil.

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