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Case Report

A 49-year-old Women with Pain and Blurring of Vision in Right Eye

Md Ayakub Nobi[1], Ishrat Binte Reza[2], Farhana Hossain[3], HAM Nazmul Ahasan[4]

Abstract:

Orbital pseudotumor is a rare benign non-infective inflammatory condition of the orbit without any identifiable local or systemic causes. It has various clinical manifestations. The clinical diagnosis is based on the exclusion of orbital neoplasm, infections, and orbital manifestation of systemic illness. We report the case of a 49-year-old female presented to Popular Medical College and Hospital with the complain of progressive deteriorating symptoms of her right eye, including pain, swelling, blurring of vision, and headache without having any history of trauma or recent infection or flare up of any systemic illness. Examination of eye showed erythema, peri-orbital oedema, drooping of upper eye lid with restricted eye movement in right eye. Magnetic resonance imaging revealed orbital soft tissue enhancement. A diagnosis of orbital pseudotumor was made on the basis of inflammatory markers and Magnetic Resonance Imaging findings. She was treated with oral corticosteroids.

Key words: *orbital pseudotumor, corticosteroid.*

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Introduction

Orbital pseudotumor or orbital inflammatory pseudotumor (OIP) is a benign, noninfectious, non-specific orbital inflammation[1]. It usually affects middle aged, commonly appearing unilaterally but occasionally bilaterally. Its symptoms vary widely depending on the location and severity of the inflammation, including orbital pain, swelling, double vision, bulging eyes, limited eye movement, and decreased vision[2]. Diagnosis requires a thorough assessment of clinical signs, imaging findings, and tissue examination, also by histopathology revealing a mix of different immune cells like lymphocytes, neutrophils, macrophages, and eosinophils[3]. Glucocorticoids are the primary treatment of choice, with other options like radiotherapy, immunosuppressants, or biologic therapies considered for patients who don't respond well to or cannot tolerate glucocorticoids, or in cases requiring prolonged treatment[4].

1. Assistant Registrar of Medicine, Popular Medical College Hospital, Dhaka, Bangladesh
2. Associate Professor of Medicine, Popular Medical College Hospital, Dhaka, Bangladesh
3. Associate Professor of Ophthalmology, Popular Medical College Hospital, Dhaka, Bangladesh
4. Professor of Medicine, Popular Medical College Hospital, Dhaka, Bangladesh

Corresponding author: Dr. Md. Ayakub Nobi; Assistant Registrar of Medicine, Popular Medical College Hospital, Dhaka, Bangladesh. Email: drayakubnobi@gmail.com

Case presentation

A 49 -year-old female presented to us with right sided eye pain, peri-orbital swelling, blurring of vision associated with headache. The symptoms were sudden in onset, initially started as mild discomfort but gradually intensified over time. She denied any history of trauma or recent illness. She denied experiencing fever, chills, weight loss, slurring of speech, vertigo, vomiting, or any muscle weakness. There were no symptoms of upper respiratory tract infection, joint pain, or morning stiffness. No other focal neurological deficits or symptoms were reported. The patient had no known co-morbidity. She had no known drug or environmental allergy.

Visual acuity was reduced to counting fingers at 3 feet in the right eye and 6 feet in the left eye, with trichromatic color vision. Right eye: redness, edematous and drooping of right upper eye lid. Cornea appeared clear without epithelial breach. Pupillary examination demonstrated equal and reactive pupil bilaterally. No remarkable findings were found in the anterior chamber. The 3rd, 4th, and 6th cranial nerves

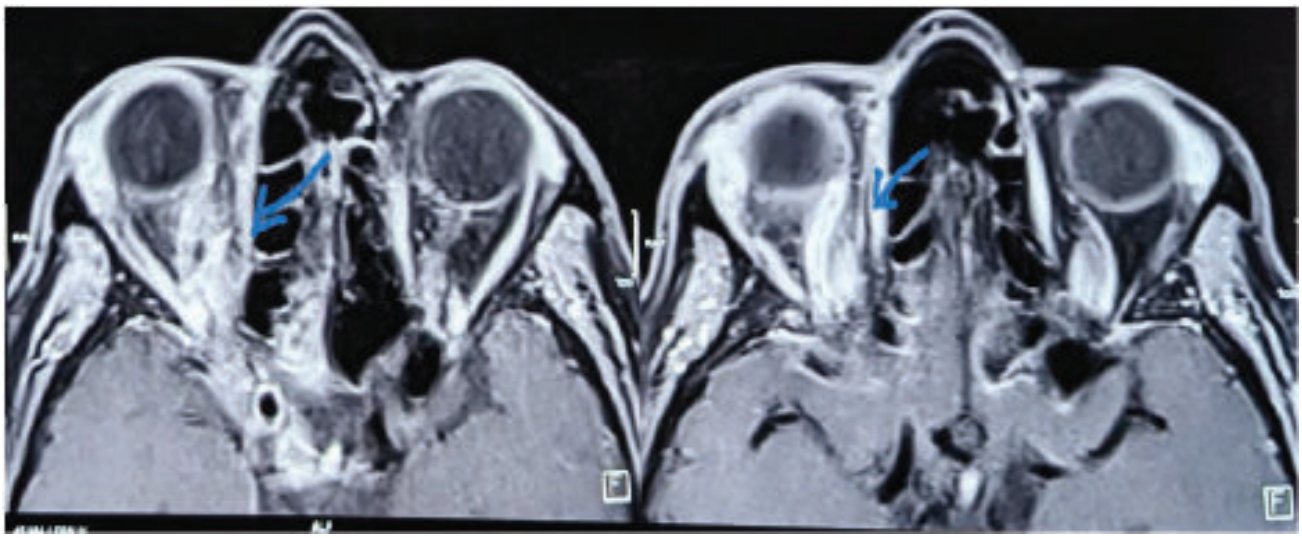

Figure: Axial MRI image with contrast showing right retro-bulbar soft tissue abnormalities.

exhibited restricted eye movement in the right eye, particularly in adduction, levoelevation, levodepression, elevation, and depression, while all movements were normal in the left eye. Fundus examination revealed normal optic disc, macula, and peripheral retina in both eyes.

Laboratory investigations showed a normal complete blood count. Erythrocyte sedimentation rate (ESR) was elevated at 78 mm in 1st hour (normal range: 0-20 mm in 1st hour), C reactive protein was elevated at 8 mg/L (normal: <5 mg/L).

Magnetic resonance imaging (MRI) of brain and orbits with contrast was done which showed enhancement of orbital soft tissue in right eye.

Based on the clinical findings, imaging findings, and laboratory findings, the patient was diagnosed as orbital pseudotumor excluding the differentials like Acute Angle Closure Glaucoma, uveitis, temporal arteritis & orbital tumor. The diagnosis was supported by elevated inflammatory markers, and MRI finding.

To control the inflammation, the patient was initiated on oral corticosteroid followed by tapering was done and proper counseling was done regarding side effects of corticosteroids.

After getting corticosteroids for 3 days patient reported a significant improvement of her symptoms including reduction of pain, swelling and visual disturbances. The patient was advised to continue the tapering schedule and maintain regular follow up visits.

Discussion

Orbital pseudotumor, or idiopathic orbital inflammatory syndrome is an uncommon inflammatory condition that causes diagnostic difficulties due to its varied presentation and lack of definite cause and clues. The way orbital pseudotumor manifests clinically can vary greatly, which makes it challenging to distinguish from other condition affecting the orbit[2]. Patients commonly report symptoms such as eye pain, protrusion of eye ball, visual disturbance, and diplopia. The exact pathogenesis of orbital pseudotumor is still in doubt but it is believed to involve an immune mediated response, there is a need to conduct further to elucidate the underlying immunological mechanism involved[1].

The diagnosis of orbital pseudotumor is totally depends on clinical presentation, laboratory findings, imaging features and more on excluding common orbital pathology. MRI with contrast plays a central role and highly sensitive in detecting the orbital inflammation[5]. MRI also helps to see the extent, localization of inflammation and exclusion of orbital neoplasm[5].

Laboratory data such as erythrocyte sedimentation rate and c-reactive protein helps by indicating the presence of systemic inflammation but low diagnostic value due to lack of specificity[1].

The management of orbital pseudotumor mainly focused on controlling the systemic inflammation and preserving patients vision[2]. Systemic corticosteroids play the central role in management. High dose oral corticosteroids were found to provide rapid response by reducing inflammation in orbital pseudotumor[2]. Other therapies such as Radiation therapy, immune-suppressive therapy such as Methotrexate or biologics have usually been used in patients with OIP who are refractory, hormone-dependent, or intolerant to systemic glucocorticoid therapy[4].

Regarding side effects of using corticosteroids for long term, its necessary to explore alternative treatment options[2]. Recent advancement of using steroid sparing agents, immunosuppressive agents such as Methotrexate and Azathioprine, biologics targeting specific inflammatory pathways, such as tumor necrosis alfa inhibitor have also shown efficacy in refractory cases[6].

Conclusions

Though orbital pseudotumor is a rare entity, it is important to exclude other possibilities and making early diagnosis to preserve vision. Our aim to create awareness among the physicians.

Author declaration

Consent for publication

Informed written consent was taken from patient to publish details relevant to the disease and management.

Competing interest

None

Authors contribution

All authors were involved in the management of the patient.

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