



INFLAMMATORY PSEUDOTUMOUR OF THE ORBIT: A RARE CASE REPORT

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ABSTRACT Orbital pseudotumours, also known as idiopathic orbital inflammatory disease, are a group of non-cancerous orbital swellings with uncertain cause. The inflammation can affect the extraocular muscles, optic nerve, glands, and surrounding connective tissue. Sometimes, the nearby paranasal sinuses may also be involved. The exact cause is still unknown, but it may be related to an abnormal immune reaction, genetics, or environmental factors. In this case, a 62-year-old man came with complaints of orbital pain, swelling, redness, conjunctival edema and proptosis of right eye. An ultrasound-guided FNAC was done. A wide local excision was performed and the tissue was sent to Department of Pathology for histopathological examination as histopathology is the gold standard for diagnosis of Orbital Pseudotumour.

KEYWORDS : orbital inflammatory disease, extraocular muscle involvement, conjunctival edema.

INTRODUCTION

Orbital pseudotumours, also known as idiopathic orbital inflammatory disease, are a group of non-cancerous orbital swellings with uncertain cause^[1]. The inflammation can affect the extraocular muscles, optic nerve, glands, and surrounding connective tissue. It does not have a true capsule and tends to infiltrate surrounding tissue. Sometimes, the nearby paranasal sinuses may also be involved^[2]. The exact cause is still unknown, but it may be related to an abnormal immune reaction, genetics, or environmental factors^[3]. Clinically, it manifests as an indurated orbital lesion that commonly surrounds the optic nerve and may extend to involve multiple extraocular muscles^[4]. Imaging findings and a characteristic response to corticosteroid therapy further support the diagnosis. This report shows a case of orbital pseudotumour and highlights the challenges faced during diagnosis and treatment^[5].

CASE REPORT

A 62 year old male presented with complaints of orbital pain, swelling, redness, conjunctival edema and proptosis of right eye since 6 months. On examination diplopia present and visual acuity was normal. The symptoms initially started as mild discomfort but gradually intensified over time. Radiological and ultrasound-guided FNAC was done. A wide local excision was performed and the tissue was sent to Department of Pathology for histopathological examination as histopathology is the gold standard for diagnosis of Orbital Pseudotumour.

RESULTS

Radiological Findings

Radiological imaging was done. His CT scan report suggested Orbital mass of lesion of neoplastic etiology. MRI reports suggested Orbital Pseudotumour.

FNAC Findings

Ultrasound guided FNAC was performed. The smear shows polymorphs population of Lymphoid cells. Impression – Reactive Lymphoid lesion consistent with inflammatory Pseudotumour.

Gross Examination

Received tissue specimen from Right eye in a single piece measuring 3.5x 3.2 x 2.9 cm.

Gross appearance – Greyish white and firm

Histopathological Findings

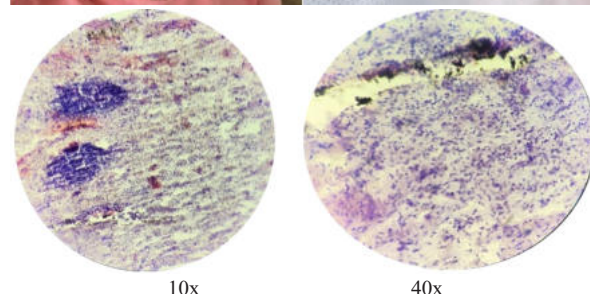
The impression shows chronic inflammatory cells like Lymphocytes along with fibroblastic spindle cells permeating the adipose tissue.

DISCUSSION

Orbital pseudotumor, also known as idiopathic orbital inflammatory syndrome, is a rare inflammatory condition that presents with varied clinical features and remains difficult to diagnose due to the absence of

an identifiable cause. The signs and symptoms include pain, proptosis, chemosis, lid swelling and ductional (motility) defects. It is a non-neoplastic space occupying lesion that presents clinically as a neoplasm. The tetrad includes the following:

1. Cellular pleomorphism characterized by the presence of mixed inflammatory cells such as lymphocytes, plasma cells, histiocytes, and eosinophils.
2. Lymphoid follicles with clear germinal centres.
3. No signs of abnormal or atypical cells.
4. Additional signs of inflammation, including plasmacytoid cells, Russell bodies, and increased small blood vessels with swollen endothelial cell



Management of orbital pseudotumor focuses on reducing inflammation and protecting vision. Systemic corticosteroids, such as prednisolone, are the primary treatment and often lead to quick improvement in symptoms. High-dose steroids are especially effective in rapidly controlling inflammation. In cases that do not respond well to steroids, biologic agents targeting specific inflammatory pathways, such as TNF-alpha inhibitors, may be used.

CONCLUSION

Orbital pseudotumour is a rare inflammatory condition of the eye that can easily be mistaken for infection or cancer because of its similar

symptoms and appearance on imaging. It can affect different structures in the orbit including extraocular muscles, optic nerve and may present with pain, swelling, redness, and bulging of the eye. Although the exact cause is still unknown, it is believed to be related to an abnormal immune response.

Most patients respond well to corticosteroids, which help reduce inflammation quickly. However, this case shows that not all patients improve with medical treatment alone. When symptoms do not respond to steroids, other treatment options such as surgery may be required. Surgical removal of the mass not only helps relieve symptoms but also provides tissue for accurate diagnosis.

This case emphasizes the need for early recognition, proper evaluation, and timely treatment to prevent complications and preserve vision. Understanding the different ways orbital pseudotumour can present is important for accurate diagnosis and effective management.

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