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Case Report

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A Rare Case of Non-Hodgkin Lymphoma Presenting as Chronic Nasolacrimal Duct Obstruction

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Introduction

Leukemic infiltration of the optic nerve is a rare but serious complication of hematologic malignancies, often leading to visual impairment. It can present with symptoms such as diplopia, vision loss, and proptosis, sometimes mimicking common ophthalmologic conditions like nasolacrimal duct obstruction. Due to its rarity, it is often misdiagnosed, delaying appropriate treatment.

Epidemiology

Leukemic or lymphomatous infiltration of the optic nerve occurs in less than 2% of all leukemia or lymphoma cases but is more frequently seen in aggressive B-cell non-Hodgkin lymphomas (NHL) and acute leukemias. It often manifests in the later stages of the disease but can also be the initial presentation in rare cases. Studies suggest that CNS involvement in NHL occurs in approximately 5-10% of cases, with optic nerve infiltration being an even rarer subset. Risk factors include high-grade lymphomas, CNS relapse, and immunosuppression.

This case highlights an unusual presentation of Non-Hodgkin Lymphoma with optic nerve involvement, initially mistaken for a chronic lacrimal system disorder, emphasizing the importance of thorough diagnostic evaluation in persistent or atypical ophthalmologic complaints.

Case Report

Patient: S.U, 66-year-old female.
Presenting Complaint: Fatigue and weakness.
Symptoms at Admission: Diplopia and blurred vision in the left eye.

Medical History

Since January 2024, the patient had excessive tearing in the left eye. She consulted a district ophthalmologist and was diagnosed with nasolacrimal duct obstruction, with a recommendation for surgical treatment. However, upon further consultation at the Ophthalmology Department of SHUTEM Hospital, the diagnosis was reconsidered, and surgery was deemed unnecessary. Instead, medical treatment was initiated. As the symptoms did not improve with medical treatment, she sought consultation at Solongo Eye Clinic in April 2024 and underwent fat removal surgery for the left eye. However, starting in May, a firm mass was palpable in the left orbital region. Four different ophthalmology clinics diagnosed her with nasolacrimal duct obstruction and recommended surgery. Throughout this period, she continued to experience excessive tearing and the presence of a firm mass in the orbit.

In May 2024, the patient visited Sasuri Eye Clinic and underwent a CT scan, which revealed a 1.7 × 1.1 cm dense infiltrative lesion (+38 HU) in the medial part of the left orbit at the lacrimal sac level.

On July 25, 2024, a biopsy was taken from both eyelids, but due to insufficient tissue for analysis, a second biopsy was performed on July 29 from the left lacrimal sac fossa, extracting approximately 2 cm of tissue.

After the first biopsy, the patient developed changes in the visual axis of the left eye, swelling of both upper and lower eyelids, and diplopia. The first PET-CT result on October of 2024, hypermetabolic lesion in the left nasolacrimal region, Deauville 4 and enlarged nodes with mild to modest uptake are seen in the upper neck and intrathoracic region (hilar and mediastinal), up to Deauville 3.

On September 2, 2024, histopathological examination confirmed the diagnosis of **Non-Hodgkin Lymphoma, Small B-cell Type**. IHC result were **CD45++, CD3-, CD20++, CD138-, bcl2+, CD79a+, ALK-8 CD30-**. The patient was referred to the National Cancer Center of Mongolia, where PET-CT imaging was performed, and **three cycles of R-CHOP chemotherapy** were administered.

Treatment Response

After the first chemotherapy, the diplopia and eyelid swelling improved. After the second cycle, the eyelid swelling completely resolved, and the patient no longer experienced double vision.

After second cycle /six course chemotherapy/ treatment, PET-CT result on March of 2025, no FDG-avid lesion in the left lacrimal/ surgical bed. head neck other areas and intrathoracic.

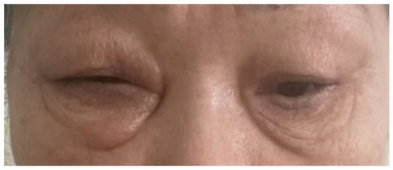

Figure 1: When diagnosed /Oct.2024/

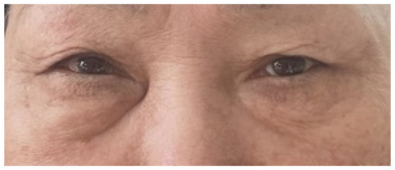

Figure 2: After #3 chemotherapy /Dec.2024/

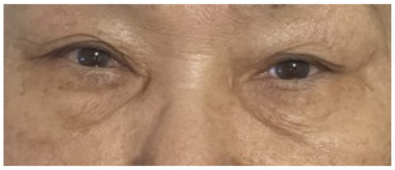

Figure 3: After #6 chemotherapy /Mar.2025/

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