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Case Report

# Curative radiotherapy for primary orbital malt lymphoma in a 90-year-old: A rare case report

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## Abstract

Orbital lymphoma is the most common malignant orbital tumor and typically affects the elderly. However, its occurrence in nonagenarians is particularly rare. This case report details the diagnosis, management, and outcome of a 90-year-old female presenting with primary orbital MALT lymphoma, emphasizing the successful use of external beam radiotherapy (EBRT) in this age group.

**Keywords:** Orbital lymphoma, MALT lymphoma, Non-Hodgkin lymphoma, External beam radiotherapy (EBRT), Proptosis, Salmon-pink mass

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## 1. Introduction

Orbital lymphoma constitutes approximately 55% of all orbital malignancies, with most cases arising from mucosa-associated lymphoid tissue (MALT), a subtype of B-cell non-Hodgkin lymphoma (NHL). While it is most frequently diagnosed in patients in their sixth or seventh decade of life, its occurrence in individuals over 90 years is extremely rare. Herein, we report a case of primary orbital MALT lymphoma in a 90-year-old female and discuss its successful treatment using EBRT.[1-4]

## 2. Case Report

A 90-year-old woman presented with a six-month history of a progressively enlarging, painless right orbital mass. There was no history of trauma, systemic illness, or corticosteroid use. The mass caused non-pulsatile proptosis without ocular bruit.

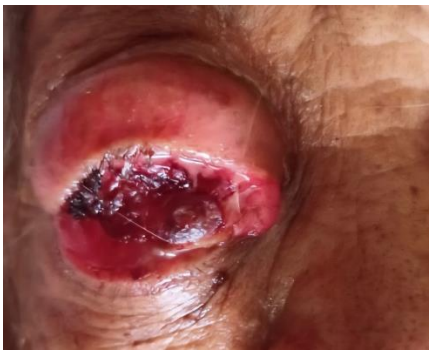

**Figure 1:** Photograph showing a salmon-pink subconjunctival mass in the right eye with associated non-pulsatile proptosis and mechanical ptosis.

Ocular examination revealed visual acuity of hand movements in the right eye and 6/60 in the left eye. There was restricted superior movement in the right eye, with normal movements in the left. Intraocular pressure was 12 mmHg (right) and 14 mmHg (left). The right eye exhibited mechanical ptosis, eyelid edema, and a salmon-pink sub-conjunctival mass extending from the superior fornix.(**Figure 1**) A mature cataract was present in the right eye, while the left eye showed nuclear sclerosis grade 2.

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Fundus examination was not possible in the right eye due to the cataract; the left eye fundus appeared normal.

On local examination, the orbital mass measured approximately 40×40 mm, was rubbery, non-adherent to the skin, non-compressible, and non-reducible, with irregular margins and a 0.5×0.5 cm central ulceration likely due to pressure necrosis. There was no regional lymphadenopathy.

Systemic evaluation revealed no history of diabetes, hypertension, thyroid disorders, or chronic respiratory symptoms. Complete blood counts, liver and renal function tests, and serum LDH were all within normal limits. CT scans of the chest, abdomen, and pelvis showed no systemic involvement. Non-contrast CT of the orbit revealed a well-defined, homogenous, lobulated soft tissue mass (45×41×25 mm) in the superolateral quadrant of the right orbit, with mild contrast enhancement but no evidence of central necrosis, perineural spread, extraocular muscle involvement, or bony erosion.(**Figure 2a,b**)

Histopathological analysis and immunohistochemistry showed CD20 and Bcl-2 positivity, CD5 negativity, and a Ki-67 index of less than 10%, confirming the diagnosis of MALT lymphoma and ruling out aggressive variant

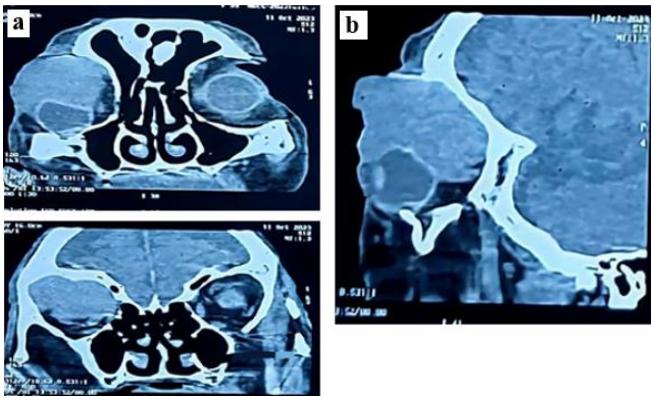


**Figure 2: a,b:** Non-contrast CT orbit showing a well-defined, homogenous, lobulated soft tissue mass (45×41×25 mm) in the superolateral quadrant of the right orbit.

*2.1. Treatment and outcome*

The patient was initially managed with intravenous ceftriaxone (1g twice daily for five days) to prevent secondary infection. She then underwent EBRT to a total dose of 40 Gy delivered in 20 fractions over 1.5 months. The mass showed complete resolution by the end of treatment, with no evidence of recurrence at six months and one year of follow-up. No radiation-induced complications were observed, likely due to meticulous ocular shielding during therapy. **(Figure 3, Figure 4, Figure 5)**

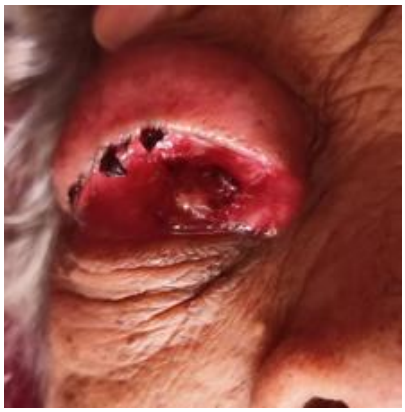

**Figure 3:** Clinical image at presentation

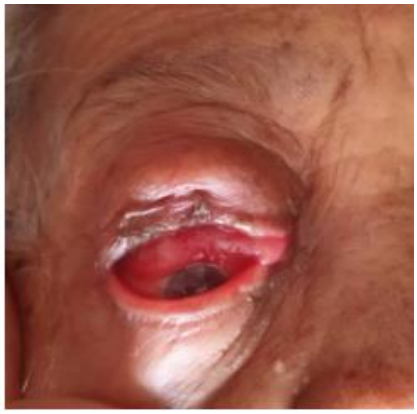

**Figure 4:** During EBRT after 15 days

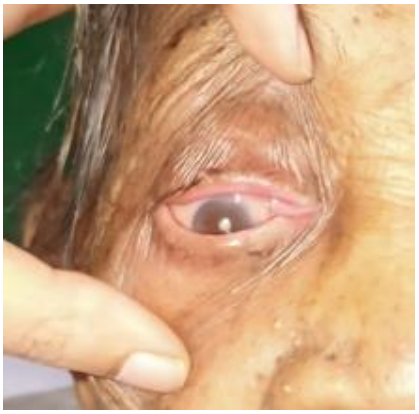

**Figure 5:** Post radiotherapy showing complete reduction

## 3. Discussion

Orbital lymphomas typically present as painless, slowly enlarging masses associated with proptosis and conjunctival changes. MALT lymphoma, the most prevalent subtype, often results from chronic antigenic stimulation. Imaging, especially contrast-enhanced CT and MRI, plays a critical role in differentiating it from conditions like orbital pseudotumor or metastases. However, definitive diagnosis relies on histopathology and immunohistochemistry. The immunophenotype of CD20 and Bcl-2 positivity with a low Ki-67 index is characteristic of MALT lymphoma and helps distinguish it from more aggressive forms.[5,6]

EBRT remains the treatment of choice for localized orbital lymphoma, with high response rates and minimal toxicity. This case adds to the growing body of evidence supporting the effectiveness and safety of EBRT, even in patients of advanced age, when careful planning and shielding are implemented.[7,8]

## 4. Conclusion

This case highlights how orbital MALT lymphoma, though uncommon in nonagenarians, can still be effectively diagnosed and treated with excellent results. Despite the patient's advanced age, she responded very well to external beam radiotherapy, achieving complete remission without any side effects or complications. This reinforces the idea that age alone should not be a limiting factor when considering treatment options especially when the disease is localized and curative therapies are available.

Accurate diagnosis through histopathology and immunohistochemistry played a key role in guiding the treatment plan, and timely intervention helped prevent further complications, such as vision loss or local invasion. With careful planning and proper shielding, EBRT proved to be both safe and effective in this elderly patient.

Overall, this case serves as a reminder that even very elderly patients can benefit from active management when appropriately evaluated. It also highlights the importance of early recognition and multidisciplinary care in ensuring the best possible outcomes. More studies in this age group could help guide future decisions and improve individualized treatment strategies.

## 5. Ethical Approval

This case was managed ethically, with written informed consent obtained and all procedures performed in adherence to the Declaration of Helsinki.

## 6. Patient Consent

In this study informed written consent from the patient was taken.

## 7. Source of Funding

None.

## 8. Conflict of Interest

None.

## References

1. Victor Pastrana, Yilena Rodriguez-Marrero, Daniel Sanchez, Dagoberto J. Morales, Roberto Sanchez, William Morse, Gal Barreneche, Caroline Wiss. Unusual Orbital Tumor Diagnosis and Management of Ocular Follicular Lymphoma: A Case Report. *Arch Clin Med Case Rep*. 2024:8:201-6.
2. Eckardt AM, Lemound J, Rana M, Gellrich NC. Orbital lymphoma: diagnostic approach and treatment outcome. *World J Surg Oncol*. 201318;11:73.
3. Pereira-Da Silva MV, Nicola MLD, Altomare F, Xu W, Tsang R, Laperriere N, et al. Radiation therapy for primary orbital and ocular adnexal lymphoma. *Clin Transl Radiat Oncol*. 2022;38:15–20.
4. Dufner V, Sayehli CM, Chatterjee M, Hummel HD, Gelbrich G, Bargou RC, et al. Long-term outcome of patients with relapsed/refractory B-cell non-Hodgkin lymphoma treated with blinatumomab. *Blood Adv*. 2019;3(16):2491–8.
5. Giovanni G, Paolo B, Rodolfo B, Federico B, Cesare G, Francesco A , et al. Orbital lymphomas: clinical and radiological features. *J Craniomaxillofac Surg*. 2014 Jul;42(5):508–12.
6. Priego G, Majos C, Climent F, Muntane A. Orbital lymphoma: imaging features and differential diagnosis. *Insights Imaging*. 2012;3(4):337–44.
7. Rubinstein TJ, Aziz HA, Bellerive C, Sires BS, Hing AW, Habermehl G, et al. Ocular/adnexal lymphoma: dissimilar to systemic lymphoma. *Surv Ophthalmol*. 2018;63(3):381–8.
8. Grossniklaus HE, Eberhart CG, Kivelä TT. WHO Classification of Tumors of the Eye. World Health Organization Classification of Tumours. 4th ed. 2018. https://publications.iarc.fr/Book-And-Report-Series/Who-Classification-Of-Tumours/WHO-Classification-Of-Tumours-Of-The-Eye-2018

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