

## Primary Lymphoma of the Lacrimal Gland on PET/CT Imaging

Şen A.E. and Erol M.: Primary Lymphoma of the Lacrimal Gland on PET/CT Imaging

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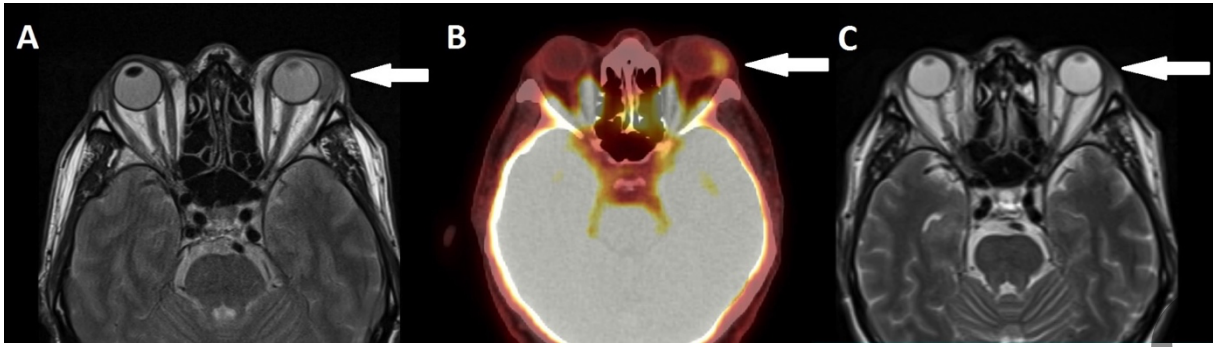
A 58-year-old male patient reported painless pressure in his left eye, starting a few months ago. Examination showed mild proptosis with no limitation in eye movements, watery eyes, or redness. The patient had no systemic symptoms such as weight loss, night sweats, or fever. Ocular MRI revealed a 23x9 mm homogeneous, non-invasive mass in the left lacrimal gland (A). Biopsy confirmed a diagnosis of lacrimal gland marginal zone lymphoma. FDG PET/CT imaging for staging showed a soft tissue lesion in the left lacrimal gland with an SUVmax of 3.16 (B). No other FDG-enhancing lesions were found. He was diagnosed with primary lacrimal gland lymphoma (Stage IE) and treated with 24 Gray radiotherapy over 12 days (C).

Primary lymphoma of the orbita and adnexa involves only these areas (Stage IE Ann Arbor classification). Secondary orbital lymphomas also show systemic involvement. Advanced diagnostics like PET, MRI, and endoscopy have detected lymphoid involvement in other body parts in cases of orbital or adnexal lymphoma, indicating secondary lymphomas may be more common than previously thought (1). Primary lymphoma of the orbita and adnexa primarily affects individuals aged 50-70 and is most often non-Hodgkin type. Lacrimal gland lymphomas make up 2-26% of ocular adnexal lymphomas, mainly extranodal marginal zone lymphoma (MALT lymphoma) (2).

Common clinical findings include painless proptosis, eyelid edema, orbital mass, and ptosis. Dry eyes are not expected (3,4). Treatments include radiotherapy, surgical resection, chemotherapy, and monoclonal anti-CD20 antibody therapy. Radiotherapy is the primary treatment, with chemotherapy providing additional benefits (5).

### References

1. Valenzuela AA, Allen C, Grimes D, Wong D, Sullivan TJ. Positron emission tomography in the detection and staging of ocular adnexal lymphoproliferative disease. *Ophthalmology*. 2006;113(12):2331-2337.
2. Jakobicc FA. Ocular adnexal lymphoid tumors: progress in need of clarification. *Am J Ophthalmol*. 2008;145(6):941-950.
3. Vest SD, Mikkelsen LH, Holm F, Rasmussen PK, Hindso TG, Knudsen MKH, Coupland SE, Esmali B, Finger PT, Graue GF, Grossniklaus HE, Honavar SG, Mulay K, Sjö LD, Sniegowski MC, Vemuganti GK, Thuro BA, Heegaard S. Lymphoma of the Lacrimal Gland - An International Multicenter Retrospective Study. *Am J Ophthalmol*. 2020;219:107-120.
4. Rasmussen P, Ralfkiaer E, Prause JU, Sjö LD, Siersma VD, Heegaard S. Malignant lymphoma of the lacrimal gland: a nation-based study. *Arch Ophthalmol*. 2011;129(10):1275-1280.
5. Tsen CL, Lin MC, Bee YS, Chen JL, Kuo NW, Sheu SJ. Ocular adnexal lymphoma: Five case reports and a literature review. *Taiwan J Ophthalmol*. 2015;5(2):99-102.



**Figure:** Ocular MRI shows a homogeneous, non-invasive mass measuring 23x9 mm in the left lacrimal gland (A). FDG PET/CT imaging shows a soft tissue lesion in the left lacrimal gland with an SUVmax value of 3.16 (B). The MRI image after radiotherapy shows that the lesion has disappeared (C).

Uncorrected proof