IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 25, Issue 2 Ser. 2 (February. 2026), PP 03-04
www.iosrjournals.org

Adult-Onset Strabismus Associated With Orbital Amyloidosis: A Narrative Clinical Review

Author

Abstract
Background : *Adult-onset strabismus is uncommon and often indicates an underlying neurological or mechanical cause. Orbital amyloidosis is a rare condition that may lead to extraocular muscle involvement and restrictive strabismus.*
Objective : *To review the clinical presentation, imaging features, and management considerations of adult-onset strabismus associated with orbital amyloidosis.*
Methods : *This is a narrative (non-systematic) review of selected published reports focusing on clinical findings, imaging characteristics, and mechanisms of strabismus in orbital amyloidosis.*
Findings : *Strabismus related to orbital amyloidosis is typically acquired in adulthood and is often restrictive in nature, resulting from amyloid infiltration of extraocular muscles or surrounding orbital tissues. Imaging commonly demonstrates localized or diffuse orbital infiltration.*
Conclusion : *Orbital amyloidosis should be considered in the differential diagnosis of adult-onset restrictive strabismus. Recognition of this rare association allows appropriate diagnostic evaluation and avoids misclassification as primary neurogenic strabismus.*
Keywords : *Adult strabismus, orbital amyloidosis, restrictive strabismus, extraocular muscles, orbit*

Date of Submission: 02-02-2026 Date of Acceptance: 12-02-2026

I. Introduction

Strabismus presenting in adulthood differs fundamentally from childhood-onset strabismus and frequently reflects an underlying pathological process. Common causes include cranial nerve palsies, thyroid eye disease, orbital tumors, and inflammatory conditions. Orbital amyloidosis is a rare disorder characterized by extracellular deposition of amyloid proteins within orbital tissues. Although eyelid and lacrimal gland involvement are more frequently reported, extraocular muscle infiltration may occur and lead to acquired strabismus. This review aims to summarize the clinical and imaging features of adult-onset strabismus associated with orbital amyloidosis.

II. Orbital Amyloidosis: General Considerations

Amyloidosis refers to a group of disorders characterized by extracellular deposition of insoluble fibrillar proteins. Orbital involvement is most often localized rather than systemic and may affect the eyelids, conjunctiva, lacrimal gland, or extraocular muscles. The condition is typically slowly progressive and may remain undiagnosed for long periods due to nonspecific symptoms.

III. Clinical Features Of Strabismus In Orbital Amyloidosis

Strabismus associated with orbital amyloidosis is usually acquired in adulthood and may present with diplopia, ocular misalignment, or limitation of ocular movements. The deviation is often incomitant and restrictive, reflecting mechanical limitation rather than neurogenic dysfunction. Examination may reveal reduced ductions in the direction of the involved muscle and absence of variability or fatigability.

IV. Imaging Characteristics

Orbital imaging plays a key role in diagnosis. Computed tomography and magnetic resonance imaging may demonstrate enlargement or infiltration of one or more extraocular muscles, often with involvement of surrounding orbital fat or soft tissues. The imaging appearance may mimic other infiltrative orbital diseases, emphasizing the importance of considering amyloidosis in the differential diagnosis.

V. Pathophysiological Mechanisms

The mechanism of strabismus in orbital amyloidosis is primarily mechanical. Amyloid deposition within extraocular muscles leads to stiffness, reduced elasticity, and restriction of normal muscle movement. Unlike neurogenic strabismus, there is no primary impairment of cranial nerve function.

VI. Management Considerations

Management of strabismus related to orbital amyloidosis is challenging. Treatment is directed primarily at the underlying orbital disease rather than the ocular deviation itself. Surgical correction of strabismus may be considered in selected cases but can be limited by progressive infiltration and fibrosis. Long-term follow-up is essential due to the chronic nature of the condition.

VII. Discussion

Adult-onset strabismus secondary to orbital amyloidosis is rare but clinically significant. Failure to recognize this entity may lead to misdiagnosis and inappropriate management. Differentiating restrictive strabismus caused by infiltrative orbital disease from neurogenic causes is essential and relies on careful clinical examination and imaging. Published reports highlight the importance of histopathological confirmation when feasible.

VIII. Conclusion

Orbital amyloidosis is an uncommon but important cause of adult-onset restrictive strabismus. Awareness of this association, combined with appropriate imaging and clinical evaluation, facilitates accurate diagnosis and optimal patient management. Recognizing this entity helps avoid unnecessary investigations and guides appropriate therapeutic strategies.

References

[1]. Shields JA, Shields CL. Orbital Amyloidosis: Clinical Features And Diagnosis. Ophthalmology.
[2]. Levy J, Lifshitz T, Klemperer I, Et Al. Orbital Amyloidosis: Clinical And Imaging Characteristics. Surv Ophthalmol.
[3]. Khurana RN, Porco TC, Rao NA. Localized Orbital Amyloidosis Involving Extraocular Muscles. Ophthalmic Plast Reconstr Surg.
[4]. AAO BCSC. Orbit, Eyelids, And Lacrimal System.
[5]. Gertz MA, Kyle RA. Amyloidosis: Diagnosis And Management. Mayo Clin Proc.