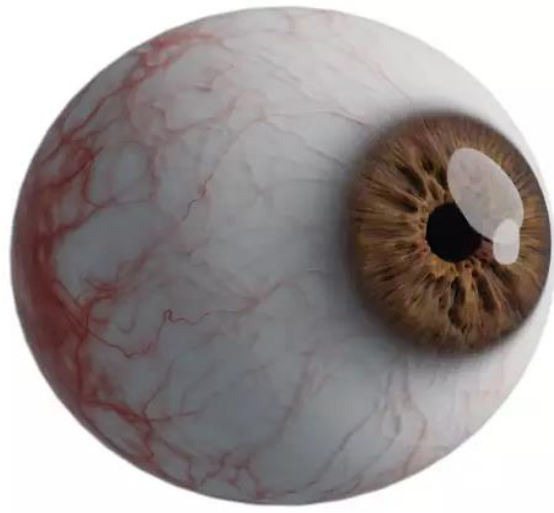


INTERDISCIPLINARY CHALLENGES OF DRUG INTERACTIONS IN OCULAR CARE FOR EYE CANCER PATIENTS

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Objectives

To evaluate clinically significant interactions between systemic therapies used in ocular cancer patients and ophthalmic medications, identify common ocular toxicities, assess their mechanisms, and propose interdisciplinary strategies for early detection, prevention, and management to optimize visual and oncologic outcomes.

Methods

A narrative review of published clinical studies, case series, and pharmacovigilance reports up to 2025 was conducted. Focus was on chemotherapy, targeted therapies, and immunotherapies in relation to commonly used ophthalmic drugs in patients with ocular tumours. Interaction patterns and management strategies were analysed.



References

Results

EGFR inhibitors and intravitreal chemotherapies cause corneal erosions and keratitis.

MEK inhibitors and radiotherapy can induce central serous retinopathy.

Immune checkpoint inhibitors may trigger uveitis and severe dry eye.

Topical corticosteroids reduce inflammation but may attenuate systemic therapy efficacy.

Beta-blocker drops, antifungals, and macrolides can exacerbate systemic toxicity via CYP3A4 pathways.

Conclusion

Drug interactions in ocular cancer patients are clinically significant. Multidisciplinary collaboration, vigilant monitoring, and individualized therapy prevent adverse events, preserve vision, optimize systemic treatment, and improve quality of life. Early recognition and proactive management are critical to minimize complications and ensure optimal outcomes.