Spotlight on paediatric retinoblastoma-related cataracts: a case series

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ABSTRACT

Retinoblastoma is the most common intraocular malignancy in children. This case series is to describe the occurrence of retinoblastoma-related cataract in 3 patients. Three patients diagnosed with bilateral retinoblastoma at ages 3 months, 7 months and 1.5 years received systemic chemotherapy (IVC), intra-arterial chemotherapy (IAC), intravitreal chemotherapy (IvitC), photocoagulation and cryotherapy. In one patient, the cataract developed concurrently with retinoblastoma, while two others developed cataracts 4- and 6-years post-diagnosis due to eye-preserving therapies. Prior to cataract formation, both the latter cases underwent multiple IAC and IvitC treatments. All patients exhibited central lens opacification, which progressed to white cataracts. Notably, in one case, there was evidence of a wedge-like cortex opacity with lens capsule wrinkling, indicating potential iatrogenic injury from intravitreal injection. The tumour in the patient with the initial cataract manifestation enlarged despite treatment, coming into contact with the posterior surface before transforming into a white cataract. Three patients underwent lens aspiration and intraocular lens implantation for thorough examination. Postoperative visual outcomes remained stable in two patients, while one required enucleation due to disease recurrence. Retinoblastoma-related cataracts, though rare, can significantly impair vision and complicate monitoring. Their development is multifactorial, necessitating a comprehensive understanding to optimise management strategies for affected children.