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Ophthalmology A

Diagnostic and Therapeutic Approach to Non-Infectious Post-Uveitic Cataract in Children: Experience of the Ophthalmology Department A, Chu Ibn Sina, Rabat

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Abstract | **Original Research Article**

Purpose: To evaluate the diagnostic and surgical management of non-infectious post-uveitic cataracts in children and to analyze visual and anatomical outcomes following phacoemulsification with intraocular lens (IOL) implantation. ***Methods:*** A retrospective study was conducted in the Department of Ophthalmology A, CHU Ibn Sina, Rabat, from June 2015 to June 2023. All children under 16 years of age diagnosed with non-infectious chronic uveitis (unilateral or bilateral) and who underwent cataract surgery were included. Epidemiological, clinical, surgical, and postoperative data were collected and analyzed. ***Results:*** Seven patients (10 eyes) were included. The mean age was 7.6 years, with a male predominance (57.1%). Juvenile idiopathic arthritis (JIA) was the most frequent etiology (57%), followed by Vogt-Koyanagi-Harada (VKH) syndrome (28%). All eyes underwent phacoemulsification with IOL implantation (90% in-the-bag). Posterior synechiae were observed in 70% of cases. Posterior capsulotomy and anterior vitrectomy were performed in 50% and 80% of eyes, respectively. Mean intraocular pressure was 13 mmHg preoperatively. Postoperative improvement of best-corrected visual acuity (BCVA ≥ 1/10) was obtained in 73% of eyes. Early postoperative inflammation occurred in 40% of cases, and late complications (macular edema, papillitis, vasculitis) in 50%. The mean follow-up was 6.5 months. ***Conclusion:*** Phacoemulsification with IOL implantation in pediatric post-uveitic cataract is feasible and effective when intraocular inflammation is strictly controlled for at least three months prior to surgery. The visual outcome depends on the etiology, pre-existing ocular damage, and rigorous postoperative management. A standardized protocol for pre-, intra-, and postoperative inflammation control is essential to optimize prognosis.

Keywords: pediatric uveitis, post-uveitic cataract, phacoemulsification, intraocular lens, inflammation control, juvenile idiopathic arthritis.

INTRODUCTION

Pediatric uveitis represents between 5% and 13% of all uveitis cases worldwide and is responsible for significant visual morbidity. Its chronic course, often asymptomatic in early stages, leads to diagnostic delay and severe complications such as cataract, glaucoma, band keratopathy, and macular edema. Among these, cataract is the most frequent, occurring in 23% to 52% of affected children, due to both chronic intraocular inflammation and long-term corticosteroid therapy. Surgery for uveitic cataract is a major challenge for ophthalmologists. Postoperative inflammatory relapse, posterior capsule opacification, and secondary glaucoma are frequent. Over the last decade, surgical outcomes have improved thanks to the systematic use of immunosuppressive therapy, biological agents, and advances in micro-incision phacoemulsification. However, there is no universally accepted management protocol, and outcomes vary considerably between centers. The aim of this study is to report our department's experience in the diagnosis, management, and surgical outcomes of non-infectious post-uveitic cataracts in children, in order to contribute to a reproducible and standardized approach.

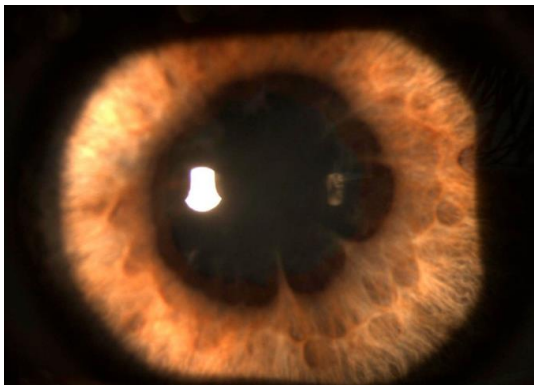
MATERIALS AND METHODS

A retrospective descriptive study was conducted at the Ophthalmology Department A of CHU Ibn Sina, Rabat, Morocco, covering a 8-year period (June 2015 – June 2023). Children under 16 years old with chronic non-infectious uveitis (unilateral or bilateral) complicated by cataract, who underwent cataract

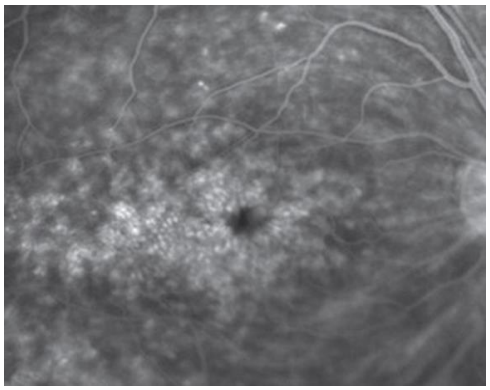
surgery, were included. Patients with infectious uveitis or incomplete medical records, or those who did not undergo surgery, were excluded. Data were extracted from clinical files and included demographics, etiology, preoperative findings, surgical data, and postoperative outcomes. All procedures were performed by the same surgical team under general or regional anesthesia. A phacoemulsification was carried out with posterior synechiolysis when necessary, followed by posterior capsulotomy and anterior vitrectomy. IOLs were acrylic hydrophobic foldable lenses implanted in-the-bag or in the sulcus. Preoperative corticosteroids were used for inflammation control, with peri- and postoperative steroid and immunosuppressive therapy when indicated.

RESULTS

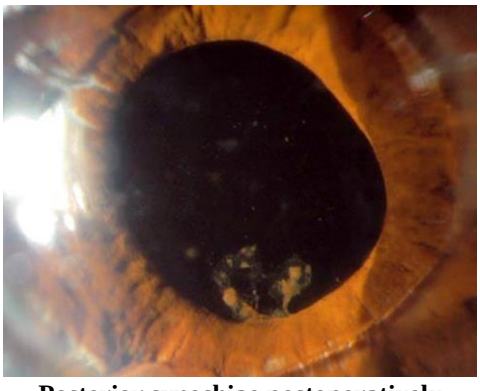
Seven patients (10 eyes) were analyzed. The mean age was 7.6 years (range 3–15), with a male predominance (57.1%). The main etiologies were juvenile idiopathic arthritis (57%), VKH syndrome (28%), and idiopathic uveitis (14%). Posterior synechiae were found in 70% of cases. All patients underwent phacoemulsification with IOL implantation (90% in-the-bag). Posterior capsulotomy and anterior vitrectomy were performed in 50% and 80% of eyes, respectively. A single capsular rupture occurred (10%). Postoperatively, BCVA ≥ 1/10 was achieved in 73% of eyes. Early inflammation was seen in 40% and late complications (macular edema, papillitis, vasculitis) in 50%. The mean follow-up was 6.5 months.



Slit lamp photograph of a child with uveitis in JIA showing 360-degree iridocrystalline synechiae



Fluorescein angiography can visualize cystoid macular spaces and diffusion often extending beyond the macular area



Posterior synechiae postoperatively

DISCUSSION

Our results confirm that cataract is the main cause of visual loss in pediatric non-infectious uveitis. The predominance of JIA-associated uveitis and the mean age of onset are consistent with international data. Strict preoperative control of inflammation for at least three months is essential to minimize complications. Phacoemulsification with IOL implantation remains the reference technique when inflammation is quiescent. Acrylic hydrophobic IOLs offer the best biocompatibility, with lower rates of posterior capsule opacification. Postoperative inflammation remains the key prognostic factor; despite good control, it occurred in 40% of our cases. Visual improvement was moderate due to preexisting ocular damage such as macular edema and optic atrophy.

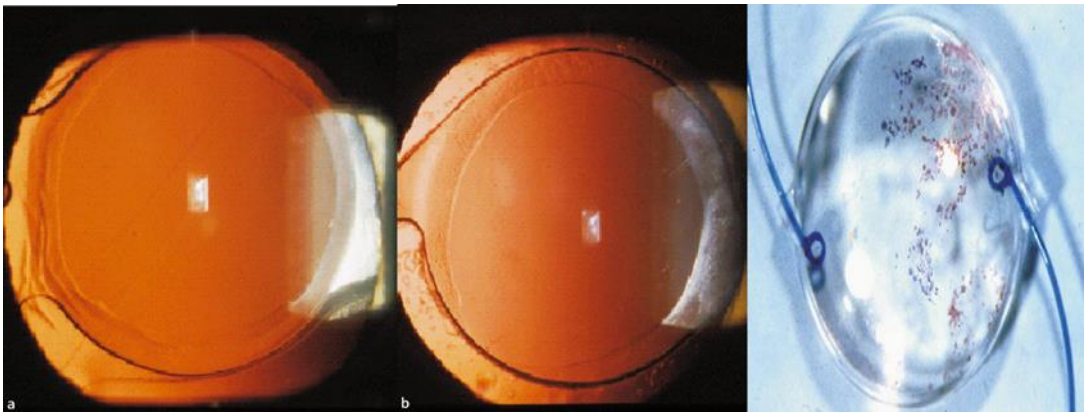


Photo of a back-illumination of hydrophilic acrylic IOL (a), hydrophobic acrylic IOL (b), and microscopic photo of silicone IOL

CONCLUSION

Phacoemulsification with primary IOL implantation is a safe and effective procedure for non-infectious post-uveitic cataracts in children when intraocular inflammation is well controlled. A multidisciplinary approach involving pediatricians and rheumatologists is essential. Further multicenter prospective studies are needed to establish standardized treatment protocols and improve long-term visual outcomes.

REFERENCES

- Smith JA, Rosenbaum JT. Pediatric uveitis: epidemiology and clinical features. Curr Opin Ophthalmol. 2018.
- Elgohary MA *et al.,* Outcome of phacoemulsification in uveitic cataract in children. Br J Ophthalmol. 2007.
- Metha S *et al.,* Perioperative management of uveitic cataract: a meta-analysis. J Cataract Refract Surg. 2019.
- Abela-Formanek C *et al.,* Comparative biocompatibility of intraocular lenses in uveitic eyes. Am J Ophthalmol. 2008.
- Vitale AT *et al.,* Juvenile idiopathic arthritis-associated uveitis: risk factors and visual outcome. Ophthalmology. 2015.