Original Article

Visual Outcomes and Complications in Pediatric Traumatic Cataract Surgery at a Tertiary Care Hospital

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ABSTRACT

Purpose: To evaluate visual outcomes of traumatic cataract surgery in pediatric patients and identify preoperative, per operative and postoperative complications of management.

Study Design: Quasi experimental study.

Place and Duration of Study: Department of Pediatric Ophthalmology and Strabismus, Al-Shifa Trust Eye Hospital, Rawalpindi from April 2024 to September 2024.

Methods: This study included 61 children (≤16 years) who underwent surgery for traumatic cataract. Patients with any pre-existing ocular pathology or follow-up <6 months were excluded. Demographic data, type of trauma, timing of surgery, type of intraocular lens (IOL), and complications were recorded. Visual acuity (VA) was measured at baseline and at one week, three months, and six months, converted to LogMAR for analysis. Statistical tests included repeated measures ANOVA and Spearman correlation.

Results: Mean age was 8.37 ± 3.62 years; 70.4% were male. Blunt and penetrating injuries were equally distributed. Foldable in-the-bag IOLs were most common (35.4%). Preoperative complications of trauma were present in 88.5%, most frequently visual axis opacification (39.3%). Postoperatively, 52.5% had no complications; others developed astigmatism (29.5%), anterior uveitis (18.0%), or IOL dislocation (9.9%). Mean LogMAR VA improved from 2.09 to 0.80 in 6 months ($p < 0.001$). Better outcomes were observed in older children and those without complications. Timing of surgery and trauma type did not significantly affect final VA.

Conclusion: Pediatric traumatic cataract surgery offers favorable visual outcomes. Age and complication profile significantly affects prognosis. Timely intervention, individualized rehabilitation, and vigilant postoperative monitoring are essential for optimizing results and minimizing long-term sequelae.

Keywords: Pediatric Traumatic Cataract, Visual Acuity, Intraocular Lens, Ocular Trauma, Amblyopia.

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INTRODUCTION

Pediatric traumatic cataract is a significant cause of visual impairment in children, particularly in low- and middle-income countries.[1] The management of such cases is complex due to factors like the variability in injury mechanisms, associated ocular damage, and the risk of amblyopia.[2] Recent studies have highlighted various factors influencing postoperative results. For instance, a retrospective review emphasized that the extent of ocular damage and the timing of surgical intervention significantly affects visual prognosis.[3] The type and location of injury, as well as the presence of additional ocular trauma, are critical determinants of postoperative visual acuity.[3]Long-term follow-up data have underscored the importance of monitoring for complications such as glaucoma and retinal detachment, which can adversely affect visual outcomes.[4,5] Pediatric eyes are also more prone to postoperative inflammation and visual axis opacification, which can compromise surgical outcomes.[6,7]

Despite these insights, there remains a paucity of data from tertiary care centers, particularly in specific geographic regions, regarding the visual outcomes and complications associated with traumatic cataract surgery in pediatric populations. This study aims to address this gap by evaluating the surgical outcomes and postoperative complications in pediatric patients undergoing traumatic cataract surgery at a tertiary care hospital of Pakistan. The results will contribute in refining surgical techniques and postoperative management strategies to improve visual rehabilitation in this vulnerable population.

METHODS

The study included all children aged 16 years or younger who underwent surgery for traumatic cataract at the Department of Pediatric Ophthalmology and Strabismus, Al-Shifa Trust Eye Hospital, between April 2024 and September 2024. All surgeries were performed by senior pediatric ophthalmologists. A detailed history of ocular trauma was recorded and categorized as open- or closed-globe injury based on standard classification. Exclusion criteria included a follow-up period of less than six months or any pre-existing ocular pathology. The study was approved by the Ethical Review Board of Al-Shifa Trust Eye Hospital, (**Reference No: ERC-12/AST-24**) and written informed consent was obtained from the parents or guardians of all participants.

Cataract extraction was performed using a standard bimanual irrigation/aspiration technique with a vitrector. All cases with penetrating injury underwent primary corneal surgery, followed by secondary cataract surgery. Primary posterior capsulotomy and anterior vitrectomy were performed in children under three years of age with an intact posterior capsule, and in children of any age with posterior capsule opacification. IOL power was calculated based on the child's age, with a 20% reduction in IOL power for children aged 2 years or younger, and a 10% reduction for those aged 8 years or younger. Depending on the status of the Capsulorhexis and capsular bag integrity, either a single-piece hydrophilic foldable IOL, a three-piece IOL, or a rigid PMMA IOL was implanted. In cases of lens subluxation with poor zonular support, lensectomy was performed.

Postoperative care included topical prednisolone acetate 1% eye drops (eight times daily), cyclopentolate hydrochloride 1% (three times daily), and moxifloxacin hydrochloride 0.5% (six times daily) for two weeks. Topical steroids were tapered over six weeks based on the degree of postoperative inflammation. In cases of persistent inflammation, oral prednisone (1 mg/kg) was administered. Follow-up visits were scheduled for one-week post-discharge and then monthly for up to six months. In patients with complications such as uveitis or elevated intraocular pressure, more frequent follow-ups were conducted. Refraction was performed at one week, three months, and six months postoperatively. Visual acuity in children under 2 years of age was assessed using preferential looking tests, while those aged 2–5 years were evaluated with Cardiff Cards, with the results were converted to Snellen equivalents. For children older than 5 years, the Snellen chart was used. For statistical analysis, all Snellen visual acuity measurements were converted to LogMAR values.

The data collected included demographic information, details of the ocular injury, time interval between trauma and surgery, preoperative ocular examination findings, intraoperative details, postoperative complications, and corrected distance visual acuity at final follow-up, with Snellen acuity converted to LogMAR for statistical analysis. Data was analyzed using Jamovi version 2.4.8. Descriptive statistics were used for demographic and clinical characteristics. Visual acuity changes over time were assessed using repeated measures ANOVA. Differences between groups based on type of trauma and surgical timing were evaluated using ANOVA and interaction effects. Spearman's correlation was used to explore associations between trauma to surgery intervals and 6-month visual outcomes. A p value less than 0.05 was considered statistically significant.

RESULTS

A total of 61 pediatric eyes (mean age: 8.37 ± 3.62 years; 70.4% male) fulfilled the inclusion criteria however there was no child below the age of two and a half years. There were 50.9% cases with blunt trauma and 49.1% cases with penetrating injuries. Wooden objects were the most frequent causative agents (32.7%). Notably, 49.1% of surgeries were performed more than six months post-injury.

Complications were documented across all three phases of management. Only 11.4% of patients had no preoperative trauma related complications. In 37.7% of cases, no intraoperative complications occurred and 52.5% of patients did not develop any postoperative complications. Details are shown in Table 2.

Complications are categorized into preoperative, intraoperative, and postoperative groups. Multiple complications were observed in some patients. Percentages are rounded, and totals may not sum to100% due to rounding.

Most patients in the study received IOL implantation. The most performed procedure was in-the-bag placement of a foldable IOL (35.4%)followed by rigid PMMA lenses placed in the sulcus (34.4%) and three-piece IOLs (14.7%). Additional surgical interventions such as capsular tension ring (CTR) implantation and iris repair were infrequent, performed in only 2.4% of cases each. A few had no IOL implantation(6.5%) due to severe ocular trauma or complications.

Visual acuity was assessed at four timepoints: preoperatively, immediately postoperatively at 1 week, at 3 months, and at 6 months. A marked improvement in vision was observed post-surgery. Preoperatively, 96.7% of patients had vision worse than 20/200. By the 6-month follow-up, 26.2% achieved VA ≥ 20/40. Mean LogMAR VA improved from 2.09

Table 1. Patient Demographics and Injury Profile

Characteristic	N=61 (%)
Age	8.37 ± 3.62; 2-16 years
Gender	
Male	43 (70.4%)
Female	18 (29.5%)
Mode of Trauma	
Blunt	31 (50.9%)
Penetrating	30 (49.1%)
Object of Trauma	
Wood	20 (32.7%)
Metal	09 (14.7%)
Plastic	04 (6.5%)
Stone	08 (13.1%)
Other	20 (32.7%)
Time from trauma to surgery	
<1 Month	02 (3.2%)
1-3 Months	13 (21.3%)
3-6 Months	16 (26.2%)
>6 Months	30 (49.1%)

Table 2: *Complications/Findings Across Preoperative, Intra-operative, and Postoperative Phases*

Phase	Complication	n (%)
Preoperative Complication	Opacification (visual axis)	24 (39.3%)
	Opacification (peripheral)	13 (21.3%)
	Adherent leucoma	6 (9.8%)
	Peripheral anterior synechiae/Posterior synechiae	18 (29.5%)
	Traumatic mydriasis	3 (4.9%)
	Aniridia	1 (1.6%)
	Anterior capsule disrupted	23(37.7%)
	Lens matter in AC	19 (31.1%)
	Lens matter in vitreous	2 (3.3%)
	Vitreous in pupil/AC	3(4.9%)
	Vitritis	2 (3.3%)
	No Preoperative Complication	7 (11.4%)
Intraoperative Complication	Incomplete/Extended Rhexis	26 (42.6%)
	Fibrosed Capsule	13 (21.3%)
	Primary PCO	9 (14.8%)
	Zonular Dialysis	4 (6.6%)
	Non-Dilating Pupil	1 (1.6%)
	No Intraoperative Complication	23 (37.7%)
Postoperative Complication	No Postoperative Complication	32 (52.5%)
	Astigmatism	18 (29.5%)
	Anterior Uveitis	11 (18.0%)
	IOL Dislocation (no reposition needed)	4 (6.6%)
	Early PCO	4 (6.6%)
	Pupil Capture	3 (4.9%)
	IOL Dislocation (needs repositioning)	2 (3.3%)
	Vitritis	2 (3.3%)
	Others (e.g., Uveal Prolapse)	1 (1.6%)

Table 3: *Distribution of Visual Acuity Pre-Operative, Post-Operative, 3-Month, And 6-Month Timepoints.*

Visual Acuity Category	Pre-Operative	Immediate Post-Operative	3-Months Post-Operative	6-Months Post-Operative
≥ 20/40Mean LogMAR	0 (0.0%)	2 (3.3%)0.08 ± 0.0	14 (23.0%)0.08 ± 0.0	16 (26.2%)0.08 ± 0.0
20/50–20/200Mean LogMAR	2 (3.3%)0.57 ± 0.0	24 (39.3%)0.57 ± 0.0	29 (47.5%)0.54 ± 0.0	29 (47.5%)0.54± 0.0
< 20/200Mean LogMAR	59 (96.7%)2.1 ± 0.5	35 (57.4%)1.74 ± 0.3	18 (29.5%)1.8 ± 0.4	16 (26.2%)1.8 ± 0.4
Overall Mean LogMAR	2.09 ± 0.5	1.26 ± 0.6	0.8± 0.7	0.80± 0.7

Table 4: *Visual Acuity (LogMAR) Over Time by Mode of Trauma.*

Injury Type	N	Pre OP VA	Post OP VA	3 Months	6 Months	p-value (Over Time)	p-value (Trauma)	P value (Trauma and Time)
Blunt	31	2.116±0.573	1.355±0.711	0.871±0.826	0.839±0.846	< .001		
Penetrating	30	2.063±0.565	1.170±0.583	0.847±0.596	0.773±0.551	< .001	0.575	0.61
Total	61	2.090±0.565	1.264±0.652	0.859±0.716	0.807±0.711	< .001		

Table 5: *Comparison of Visual Acuity at 6 Months across Age Groups.*

Age Group	n	Mean LogMAR VA	SD	Median LogMAR	IQR (LogMAR)
2–6 years	20	0.72	0.28	0.70	0.60–0.90
7–11 years	25	0.55	0.21	0.50	0.40–0.70
12–16 years	23	0.39	0.19	0.40	0.20–0.50

preoperatively to 0.80 in 6 months, with the most significant improvement occurring within the first three months (Table 3).

The LogMAR mean ± SD for the ≥ 20/40 and 20/50–20/200 categories remain identical because each eye in those groups was assigned the exact fixed midpoint LogMAR value, yielding zero within-category variance.

When evaluating the impact of surgical timing, no statistically significant correlation was found between the trauma-to-surgery interval and final visual outcome Figure 1. However, patients who underwent surgery within one month had the best visual acuity (mean LogMAR 0.60), while those treated after more than six months had poorer outcomes (mean LogMAR 0.987). Repeated measures ANOVA confirmed significant improvement in vision across all timepoints ($p < 0.001$), but differences between timing groups were not statistically significant.

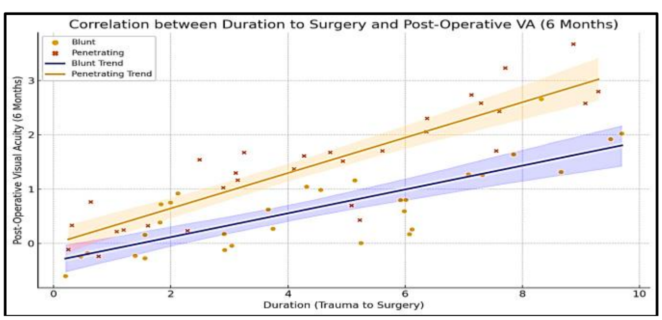

Figure 1: Scatter plot of Trauma-to-Surgery Duration vs. 6-month Post-operative VA by Trauma Type.

Both blunt and penetrating injuries showed significant improvement in VA over time ($p < 0.001$), with no statistically significant difference in outcomes between the two groups ($p = 0.575$) Table 4. The trajectory of visual recovery was parallel in both groups.

Visual outcomes were significantly influenced by age (Table 5). At 6 months, children aged 12–16 years achieved the best outcomes (median LogMAR 0.40). The differences were statistically significant ($p = 0.011$). Children with preoperative complications had significantly worse visual outcomes at 6 months (mean LogMAR 0.71) compared to those without such complications (mean LogMAR 0.48; $p = 0.004$). Similarly, patients with postoperative complications had delayed and less complete recovery. Their mean LogMAR improved only slightly from 0.74 in 3 months to 0.69 in 6 months. In contrast, those without postoperative complications improved from 0.54 to 0.45 over the same period. This difference was statistically significant ($p = 0.018$), reinforcing the detrimental impact of postoperative inflammation and other complications on final visual outcome.

DISCUSSION

Pediatric traumatic cataract remains a significant cause of visual disability, especially in low-resource settings where timely access to specialized care is limited. Traumatic cataracts differ markedly from congenital and developmental cataracts in their etiopathogenesis, clinical profile, and surgical challenges, due to the complex interplay of trauma-related ocular damage, risk of amblyopia, and increased surgical difficulty. Our study, conducted at a tertiary eye care center of Pakistan, provides insights into the spectrum of injuries, surgical interventions, complications, and visual outcomes over a six-month follow-up period.

Consistent with global trends, the majority of children affected in our cohort were male (70.4%), a finding often attributed to higher levels of outdoor activity and risk-taking behavior among boys.[8,9] The near-equal distribution of blunt and penetrating injuries (50.9% and 49.1%, respectively) highlights the need for vigilance regarding all forms of ocular trauma, not just sharp-object injuries traditionally perceived as more vision-threatening. The balanced distribution of blunt and penetrating injuries aligns with other large-scale reviews of pediatric trauma.[10,11] For instance, a study by Shah et al, reported that 68% of pediatric traumatic cataracts resulted from penetrating injuries, while 32% were due to blunt trauma.[9] Similarly, research in Nigeria found that 88.8% of pediatric traumatic cataract were due to closed globe injuries.[11] These studies highlight the significant prevalence of both injury types in pediatric ocular trauma and hence prompt management for all forms of ocular trauma in children.

Early surgical intervention is widely supported as essential to reduce amblyopia risk and improve visual prognosis. Although our analysis did not reveal a statistically significant relationship between trauma-to-surgery interval and final visual acuity, there was a discernible trend toward better outcomes with earlier intervention. Children who underwent surgery within one month of trauma had a mean LogMAR VA of 0.60 at six months, compared to 0.987 in those operated after more than six months. A study by Shah et al, reported that early surgical intervention in pediatric traumatic cataracts led to significant visual improvement, with better outcomes observed in cases with timely intervention.[9] Similarly, research by Günaydın NT and Oral AYA highlighted that the timing of cataract surgery was a significant factor influencing final visual acuity in pediatric patients, hence advocating for timely intervention to reduce the risk of stimulus deprivation amblyopia and prevent secondary complications such as uveitis, synechiae, and glaucoma.[12] Delayed surgery often reflects either late presentation due to poor health-seeking behavior or deferral of surgery due to unresolved inflammation or corneal opacities. In our study, it was mostly because a large percentage of patients had a primary surgery for penetrating injury. A certain time was given for the healing of primary wound before proceeding for secondary traumatic cataract surgery.

Age at surgery was a significant predictor of visual outcome. Children aged 12–16 years achieved better median visual acuity (LogMAR 0.40) compared to younger children aged 2–6 years (LogMAR 0.70). This may be attributed to multiple factors including better cooperation during postoperative care, mature visual systems less prone to amblyopia, and improved compliance with spectacle correction and patching. This age-related trend has been substantiated in various prospective and retrospective studies.[13,14] Younger children require tailored amblyopia therapy and more aggressive inflammation control to achieve similar rehabilitation outcomes, which emphasizes the importance of age-appropriate postoperative protocols and parental education.

Nearly 89% of our patients presented with at least one preoperative complication, most notably visual axis opacification (39.3%) and lens matter in the anterior chamber (31.1%).Conditions like peripheral anterior synechiae/posterior synechiae (29.5%) and adherent leucoma (9.8%) further complicated surgical management and were significantly associated with poorer visual outcomes (mean LogMAR 0.71 vs 0.48 in patients without preoperative complications; $p = 0.004$). These statistics reinforce the need for improved awareness among caregivers and general practitioners to recognize signs of pediatric ocular trauma and facilitate early referral. Intraoperatively, 62.3% of cases encountered some form of complication, the most common being incomplete or extended Capsulorhexis (42.6%). Intraoperative challenges such as Capsulorhexis extension or fibrosed capsules often arise in trauma cases and require adaptive surgical strategies . A study by Verma et al, found that posterior capsulotomy with anterior vitrectomy improved outcomes in such complex eyes.[15] Mastery of anterior vitrectomy and proficiency in managing compromised capsular support are therefore indispensable for surgeons dealing with pediatric trauma cases.

Despite the inherent risks, over half the patients (52.5%) had an uneventful postoperative course. Nevertheless, a considerable number developed complications, most notably astigmatism (29.5%), anterior uveitis (18.0%), and early posterior capsular opacification (PCO) (6.6%). Astigmatism was likely induced by corneal scars or irregularities from primary wound repair and necessitates careful long-term refractive follow-up. Postoperative inflammation, visual axis opacification, and IOL dislocation remain significant risks, especially in younger children.[15] There are high rates of strabismus, glaucoma, and PCO following lensectomy in traumatic pediatric cases, reinforcing the importance of close monitoring.[16]

IOL implantation was achievable in most cases. The most used IOL type was an in-the-bag foldable lens (35.4%), followed by rigid PMMA lenses placed in the sulcus (34.4%) and three-piece IOLs (14.7%).A retrospective study analyzed pediatric traumatic cataract cases over a decade, reporting primary IOL implantation in 70.9% of eyes, with successful visual outcomes in a significant proportion of patients.[12] The choice of IOL and placement technique was determined by the integrity of anterior and posterior capsule with appropriate adjustments made to IOL power as documented in previous studies as well.[17] Aphakia was necessary in only 6.5% of patients, typically due to severe ocular trauma that precluded safe implantation. IOL dislocation occurred in 9.9% of cases, some of which required surgical repositioning, highlighting the ongoing concerns about long-term IOL stability, particularly in eyes with compromised zonular support or trauma-induced capsular fibrosis.

Recent literature supports the use of capsular tension rings (CTRs) and scleral-fixated lenses in cases with compromised capsular support.[18] Our study had limited use of these techniques (CTR in only 2.4%)due to cost constraints or surgical preference but should be explored more in future protocols.

A significant proportion of children demonstrated notable visual improvement, with the mean LogMAR visual acuity improving from 2.09 preoperatively to 0.80 at six months postoperatively ($p < 0.001$). Approximately 26.2% of patients achieved a final visual acuity of 20/40 or better, underscoring the potential for functional visual recovery with timely and appropriate intervention. In comparison, another study reported that 34.4% of children attained a final visual acuity of 0.3 LogMAR (Snellen 6/12) or better on long-term follow-up.[19]

The role of optical correction and amblyopia therapy is critical, particularly in younger children. Incorporating vision therapy and structured occlusion regimens into routine postoperative care is essential, alongside robust parental counseling to ensure compliance. Visual recovery was significantly poorer in children who developed postoperative complications, with a mean final visual acuity of 0.69 compared to 0.45 in those without complications ($p = 0.018$). These findings highlight the importance of preventing complications, ensuring early detection, and initiating prompt, aggressive management when needed.

Long-term follow-up is imperative. Complications such as glaucoma, retinal detachment, and posterior capsular opacification can develop months after surgery, emphasizing the need for structured postoperative care. A 2024 study by Schmidt et al, highlighted that the long-term risk of developing glaucoma after childhood cataract surgery was 48% by the age of 70, emphasizing the need for lifelong monitoring.[20] Research indicates that the risk of retinal detachment following pediatric cataract surgery is increased over time. A study reported a 5.5% risk within 10 years.[21] Hence it is important to plan standardized pediatric follow-up protocols across tertiary centers.

Our study is limited by its short duration, single-center setting, and relatively short follow-up period of six months. Longer follow-up is essential to capture late-onset complications such as glaucoma, retinal detachment, and amblyopia persistence. Moreover, objective measurement of compliance with amblyopia therapy, the psychosocial impact of trauma, and quality-of-life metrics could provide a more comprehensive understanding of rehabilitation in these children.

CONCLUSION

Pediatric traumatic cataract surgery can yield favorable visual outcomes despite complex preoperative presentations and intraoperative challenges. Early intervention, age-appropriate rehabilitation, and close follow-up are critical to optimizing visual recovery. Prevention of ocular trauma, public awareness, and timely referral to specialized centers remain fundamental in reducing the burden of childhood blindness caused by trauma. There is a need for regional trauma registries and multicenter collaborations to standardize treatment protocols and monitor long-term visual outcomes.

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Ethical Approval: The study was approved by the Institutional review board/Ethical review board **(Reference No: ERC-12/AST-24)**.

REFERENCES

1. **Solebo AL, Cumberland PM, Rahi JS.** Whole-population vision screening in children aged 4-5 years to detect amblyopia. Lancet. 2015;**385(9984):**2308-2319. Doi: 10.1016/S0140-6736(14)60522-5.
2. **Sheeladevi S, Lawrenson JG, Fielder AR, Suttle CM.** Global prevalence of childhood cataract: a systematic review. Eye (Lond). 2016;**30(9):**1160-1169. Doi: 10.1038/eye.2016.156.
3. **Doğan E, Çelik E, Gündoğdu KÖ, Alagöz G.** Characteristics of pediatric traumatic cataract and factors affecting visual outcomes. Injury. 2023;**54(1):**168-172. Doi: 10.1016/j.injury.2022.09.034.
4. **Hilely A, Leiba H, Achiron A, Hecht I, Parness-Yossifon R.** Traumatic Cataracts in Children, Long-Term Follow-up in an Israeli Population: A Retrospective Study. Isr Med Assoc J. 2019;**21(9):**599-602. PMID: 31542904.
5. **Oshika T, Endo T, Kurosaka D, Matsuki N, Miyagi M, Mori T, et al.** Long-term surgical outcomes of pediatric cataract-multivariate analysis of prognostic factors. Sci Rep. 2023;**13(1):**21645. Doi: 10.1038/s41598-023-49166-2.
6. **Self JE, Taylor R, Solebo AL, Biswas S, Parulekar M, Dev Borman A, et al.** Cataract management in children: a review of the literature and current practice across five large UK centers. Eye (Lond). 2020;**34(12):**2197-2218. Doi: 10.1038/s41433-020-1115-6.
7. **Lenhart PD, Lambert SR.** Current management of infantile cataracts. Surv Ophthalmol. 2022;**67(5):**1476-1505. Doi: 10.1016/j.survophthal.2022.03.005.
8. **Xu YN, Huang YS, Xie LX.** Pediatric traumatic cataract and surgery outcomes in eastern China: a hospital-based study. Int J Ophthalmol. 2013;**6(2):**160-164. Doi: 10.3980/j.issn.2222-3959.2013.02.10.
9. **Shah M, Shah S, Shah S, Prasad V, Parikh A.** Visual recovery and predictors of visual prognosis after managing traumatic cataracts in 555 patients. Indian J Ophthalmol. 2011;**59(3):**217-222. Doi: 10.4103/0301-4738.81043.
10. **Jinagal J, Gupta G , Gupta PC, Yangzes S, Singh R, Gupta R, et al.** Visual outcomes of pediatric traumatic cataracts. Eur J Ophthalmol. 2019;**29(1):**23-27. Doi: 10.1177/1120672118757657.
11. **Ugalahi MO, Olusanya BA, Aremu OO, Baiyeroju AM.** Outcome of surgery for traumatic cataract in children in a child eye health tertiary facility, Ibadan, Nigeria Ther Adv Ophthalmol. 2021;**13:**25158414211005308.Doi: 10.1177/25158414211005308.
12. **Günaydın NT, Oral AYA.** Pediatric traumatic cataracts: 10-year experience of a tertiary referral center. BMC Ophthalmol. 2022;**22(1):**199. Doi:10.1186/s12886-022-02427-6.
13. **Solebo AL, Cumberland PM, Rahi JS.** Whole-population vision screening in children aged 4-5 years to detect amblyopia. Lancet. 2015;**385(9984):**2308-2319. Doi: 10.1016/S0140-6736(14)60522-5.
14. **Nihalani BR, VanderVeen DK.** Benchmarks for outcome indicators in pediatric cataract surgery. Eye (Lond). 2017;**31(3):**417-421. Doi: 10.1038/eye.2016.240.
15. **Verma N, Ram J, Sukhija J, Pandav SS, Gupta A.** Outcome of in-the-bag implanted square-edge polymethyl methacrylate intraocular lenses with and without primary posterior capsulotomy in pediatric traumatic cataract. Indian J Ophthalmol. 2011;**59(5):**347-351. Doi: 10.4103/0301-4738.83609.
16. **Chaudhry RK, Rehman AU, Qamar Khan MN, Dad M, Kazi GQ.** Visual Outcome Of Paediatric Traumatic Cataract In Paediatric Ophthalmology Department Of A Tertiary Care Hospital. J Ayub Med Coll Abbottabad. 2022;**34(1):**87-90. Doi: 10.55519/JAMC-01-8454.
17. **Trivedi RH, Wilson ME.** Posterior capsule opacification in pediatric eyes with and without traumatic cataract. J Cataract Refract Surg. 2015;**41(7):**1461-1464. Doi: 10.1016/j.jcrs.2014.10.034.
18. **Cai L, Han X, Jiang Y, Qiu X, Qian D, Lu Y, et al.** Three-Year Outcomes of Cionni-Modified Capsular Tension Ring Implantation in Children Under 8 Years Old With Ectopia Lentis. Am J Ophthalmol. 2021;**224:**74-83. Doi: 10.1016/j.ajo.2020.11.011.
19. **Adlina AR, Chong YJ, Shatriah I.** Clinical profile and visual outcome of traumatic paediatric cataract in suburban Malaysia: a ten-year experience. Singapore Med J. 2014;**55(5):**253-256. Doi: 10.11622/smedj.2014067.
20. **Schmidt DC, Eriksson F, Bach-Holm D, Grønskov K, Kessel L.** Long-term risk of glaucoma after cataract surgery in childhood. Acta Ophthalmol. 2024;**102(6):**667-673. Doi: 10.1111/aos.16636.
21. **Sabr M, Semidey VA, Rubio-Caso MJ, Aljuhani Jnr R, Sesma G.** Incidence and Risk Factors for Retinal Detachment Following Pediatric Cataract Surgery. Clin Ophthalmol. 2024;**18:**1623-1636. Doi: 10.2147/OPTH.S464005.

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Sarah Naveed Malik; Senior Registrar: *Concepts, Design, Literature Search, Data Acquisition, Data Analysis, Statistical Analysis, Manuscript Preparation, Manuscript Editing, Manuscript Review.*

Sumaira Altaf; Professor: Concepts, *Design, Literature Search, Data Analysis, Manuscript Preparation, Manuscript Editing.*

Rabeeah Zafar; Assistant Professor: *Literature Search, Data Acquisition, Manuscript Preparation.*

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