

The ocular complications among pediatric patients with acute lymphoblastic leukemia: 10 years retrospective study

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April 20, 2024

Abstract

Purpose: Investigate the incidence of ocular complications in pediatric patients with acute lymphoblastic leukemia (ALL), focusing on steroid-induced ocular hypertension, cytomegalovirus (CMV) retinitis, and fungal chorioretinitis. **Methods:** We performed a retrospective study among pediatric patients with ALL during the period from January 2013 to December 2022. The ocular manifestations, complications, and patients' condition were recorded and analyzed. **Results:** This retrospective study analyzed 167 patients with ALL diagnosed between 2013-2022. Ocular examinations (including intraocular pressure and/or retinal evaluation) were performed for 114 patients. Among examined patients, 37% (32/87) developed steroid-induced ocular hypertension with mean intraocular pressure (IOP): 25.08 mmHg, 95% CI [24.11, 26.06] which demonstrated a significant difference compared to the study's population's (18.94 mmHg, 95% CI [17.98,19.90]). One patient had unilateral cytomegalovirus (CMV) retinitis, and three had fungal chorioretinitis. **Conclusion:** This 10-year retrospective study highlights the substantial occurrence of ocular hypertension, and infectious chorioretinitis, emphasizing the importance of early ophthalmic evaluation and prompt intervention for pediatric ALL patients. Further prospective studies are needed to refine risk assessment and optimize management strategies.

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