

Hypopyon: A Rare Presentation of Relapsed Acute Lymphoblastic Leukemia in a Child

S. Aro Shime Hercules*, Latha**, Julis Scott Xavier***

Sri Ramachandra Medical College and Research Institute, Chennai, India

E-mail: aroshime92@gmail.com

Background

Leukemia showing relapse in the eye, may have the ocular manifestations ranging from leukemic retinopathy to involvement of the iris and anterior chamber. Ocular manifestations presenting as hypopyon may occur in relapse Acute lymphoblastic leukemia (ALL), Acute Myeloid Leukemia (AML), and Chronic Myeloid Leukemia (CML).

We report a case of unilateral hypopyon as a rare presenting feature of relapsed Acute Lymphoblastic Leukemia (ALL) in a paediatric patient. Relapse in ALL usually occurs in bone marrow, CSF and testis. Ocular manifestations are extremely rare. We report a 5-year old male child presented with unilateral hypopyon after completion of chemotherapy. Anterior chamber aspirate showed malignant cells (leukemic infiltrates). Subsequently, he was found to have relapse in bone marrow and CSF too. After initiation of chemotherapy, his hypopyon resolved and he is doing well in follow up.

Case

A five year old child was diagnosed with acute lymphoblastic leukemia in december 2009, when he presented with hyper leucocytosis, hepatomegaly and generalized lymphadenopathy. His bone marrow was confirmed of pre-B CALLA positive ALL. CSF analysis was normal. Cytogenetics did not reveal any abnormality. He underwent chemotherapy and prophylaxis cranial irradiation till December 2012. After completion of treatment, one month later he was found to have abnormality in the left eye, for which he went to

the ophthalmologist, who suspected relapse and confirmed with aspiration of anterior chamber fluid. He was referred back to paediatric oncologist, he confirmed relapse of ALL in bone marrow and CSF. He has completed 3 month chemotherapy and he is doing well. After 1 month, his hypopyon resolved.

Results & Conclusions

Hypopyon is a leucocytic exudate seen in the anterior chamber. It is a sign of inflammation of the uvea and iris. Hypopyon can also present in corneal ulcer, particularly of fungal etiology like *Aspergillus* and *Fusarium* sp., Behcets disease, endophthalmitis and panuveitis/panophthalmitis. Rarely hypopyon may be the presenting feature of relapse in acute lymphoblastic leukemia or other leukemias. In ALL, anterior chamber involvement has been estimated at 2.5 to 18% of relapse cases depending upon the stage of the disease. The mechanisms by which the cells migrate into the anterior chamber are not clear. One hypothesis holds that the cells are sequestered in the long posterior ciliary vessels and pass into the anterior chamber through the iris vessels. A hypopyon child would make a suspicion of masquerade syndrome. A relapse should be suspected in the background of leukemia, and anterior chamber paracentesis and other studies to rule out relapse should be done in a child, especially if it is a treatment resistant hypopyon. Early diagnosis can save vision. Periodic ocular examination including slit lamp examination should be performed in all leukemic patients on remission. We report this so that ophthalmologist should be aware of this rare manifestation of hypopyon and leukemia.