

## CMV retinitis in a T-cell acute lymphoblastic leukaemia patient - a case report

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**Introduction:** Cytomegalovirus (CMV) retinitis is known to be associated with profound immunosuppression as in patients with HIV/AIDS and post stem cell transplants. We report a case of CMV retinitis in a child diagnosed with T-cell acute lymphoblastic leukaemia (T-ALL) where aggressive treatment with intravitreal ganciclovir and intravenous ganciclovir helped in controlling the progression of CMV retinitis and to improve visual acuity.

**Case report:** A four-year-old girl who was diagnosed with T-ALL was on maintenance therapy since August 2020. In December 2021, the mother noticed difficulty in focusing and an inflammatory cause in the eye was suspected. There was no fever and systemic examination was unremarkable at the time of presentation. Full blood count revealed lymphopenia but no neutropenia and the haemoglobin was 8mg/dl. Chest X-ray was normal. Eye examination revealed active inflammatory lesions in the right eye with a scarred left eye. CMV PCR was positive in blood with  $9.69 \times 10^5$  IU/mL and vitreous sample obtained from the right eye with  $9.1 \times 10^9$  IU/mL. HIV screening was negative. Systemic ganciclovir and intravitreal ganciclovir for the right eye were initiated and followed up with maintenance therapy. Renal function and bone marrow suppression were monitored. Response to treatment was assessed with reduction of CMV PCR on blood and vitreous fluid and improvement in vision by eye examination. At the end of induction treatment, her visual acuity of the right eye improved with the settling of retinal inflammation. The left eye was not recoverable. The plan was to continue oral valganciclovir maintenance therapy for further six months from the completion of chemotherapy with regular monitoring of CMV viral load.

**Conclusions:** CMV retinitis in T-ALL patients on maintenance therapy is a rare occurrence but cases are reported. At the time of initial presentation, the left eye was already scarred, and it is likely that the disease started in that eye, but the child couldn't communicate the visual impairment until both eyes got involved. CMV retinitis is treatable, and the prognosis is promising. Even though it is rare we must be vigilant in an immunocompromised patient complaining of vision problems regarding a possibility of CMV retinitis.


**Keywords:** *CMV retinitis, T-ALL, intravitreal ganciclovir*

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