CHALLENGES IN MANAGING PEDIATRIC POST – HEMATOPOIETIC STEM CELL TRANSPLANTATION CMV REACTIVATION: SALVAGE THERAPY WITH LETERMOVIR

Aswathi Gangadharan, Suma TL, Smitha Shekar, Amit D Galgali, Chintankumar Kasawala, Priyank Tripathi, Intezar Mehdi.

INTRODUCTION

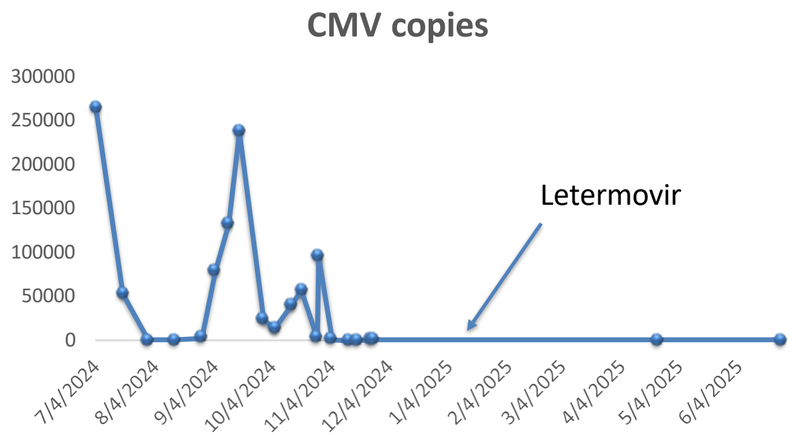
- Cytomegalovirus (CMV) reactivation remains a major post- allogenic HSCT.
- Treatment is limited by antiviral toxicities and emerging drug resistance.
- Letermovir is approved for CMV prophylaxis in HSCT recipients.
- Emerging evidence suggests its use as salvage therapy in refractory CMV.
- This case highlights successful use of letermovir in drug- resistant CMV infection post- transplant.

METHODS

- Patient: 9-year-old boy with relapsed AML (NRAS, GATA1 mutations).
- Underwent 10/10 HLA- matched unrelated donor HSCT.
- Developed high- titer CMV reactivation despite Valganciclovir and IV Ganciclovir.
- UL97 mutation detected- confirmed Ganciclovir resistance.
- Treated with IV Cidofovir- partial response, persistent low-grade viremia.
- Letermovir initiated as salvage therapy due to resistance and nephrotoxicity risk for Cidofovir.

RESULTS

- After initiating Letermovir at a dose of 240mg once daily due to coadministration with Cyclosporine, viral load showed a **rapid and sustained decline**.
- The patient maintained CMV **DNA negativity** on subsequent follow-ups.
- Letermovir was well tolerated with minimal toxicity and no further episodes of refractory CMV reactivation occurred after its initiation.



DISCUSSION/CONCLUSION

- Drug-resistant CMV infection after HSCT, poses major therapeutic challenges.
- Letermovir, although approved for prophylaxis, showed strong efficacy as salvage therapy in this refractory case.
- Current guidelines (MD Anderson, 2022) restrict Letermovir to prophylactic use, underscoring the lack of established salvage option for resistant CMV
- This case supports the potential role of Letermovir in managing resistant CMV infections, highlighting the need for further pediatric studies.
- Letermovir may serve as an important salvage option in resistant CMV, especially in pediatric HSCT settings.

REFERENCES

1. Robin C, Thiebaut A, Alain S, Sicre de Fontbrune F, Berceanu A, D'Aveni M, et al. Letermovir for Secondary Prophylaxis of Cytomegalovirus Infection and Disease after Allogeneic Hematopoietic Cell Transplantation: Results from the French Compassionate Program. Biology of Blood and Marrow Transplantation. 2020 May;26(5):978–84.
2. Kilgore JT, Becken B, Varga MG, Parikh S, Prasad V, Lugo D, et al. Use of Letermovir for Salvage Therapy for Resistant Cytomegalovirus in a Pediatric Hematopoietic Stem Cell Transplant Recipient. Journal of the Pediatric Infectious Diseases Society [Internet]. 2020 Sep 17 [cited 2023 Dec 28];9(4):486–9. Available from: https://pubmed.ncbi.nlm.nih.gov/31362308/