A-B-CMV is NOT Easy as 1-2-3 in Pediatrics: Pediatric Considerations for Cytomegalovirus (CMV) Management in Hematopoietic Stem Cell Transplant Patients

**Activity Title:**

Erin Tamulonis

**Speaker:**

**Objectives:**

1. Identify pathophysiology and diagnostics for cytomegalovirus (CMV) infection in hematopoietic stem cell transplant (HCT) patients.
2. Discuss recommendations for CMV prophylaxis, with a focus on differences between pediatric and adult HCT patients.
3. Describe treatment options for CMV in HCT, including refractory or resistant cases.

**Presentation Abstract:**

Cytomegalovirus (CMV) is a common virus that rarely causes illness in healthy patients but can cause clinically significant infection in patients with weakened immune systems. Hematopoietic stem cell transplant (HCT) recipients with CMV reactivation are at increased risk for morbidity and mortality. Recent guidelines published in 2021 address prophylaxis and treatment of CMV in both pediatric and adult patients. Historically, there was no guideline supported prophylactic agent specific for CMV until the FDA approval of letermovir in 2017. In the 2021 guidelines, maribavir is discussed as an investigational agent, though it was FDA approved in late 2021 for post-transplant refractory CMV infection or disease. Current FDA approvals and lack of large pharmacokinetic studies in pediatric patients limit the broad use of letermovir and maribavir in this population; however, case reports demonstrate that these are potential therapeutic options.

**Format:**

Live

Home study

Live and Home study

Webinar (Live)

January 25, 2023

**Date of Live Activity:**

**Activity length (hr. or CEU): 1 hour**

Topic Designators – activities are related to:

If a CPE activity’s target audience is exclusively for pharmacists, the designation “P” will be used as follows:

01-P Disease State Management/Drug therapy

02-P AIDS therapy

03-P Law (related to pharmacy practice)

04-P General Pharmacy

05-P Patient Safety

06-P Immunizations

07-P Compounding

08-P Pain Management/Opioids

**Audience Questions:**

1. Which of the following is a risk of CMV infection in HCT patients?​
2. Retinitis​
3. End organ damage​
4. Rejection of the graft​
5. All of the above​
6. What is the recommended agent for CMV prophylaxis in CMV seropositive allogeneic HCT recipients, based on the 2021 American Society for Transplantation and Cellular Therapy (ASTCT) guidelines?​
7. Valganciclovir ​
8. Maribavir​
9. Letermovir​
10. Foscarnet​
11. Which of the following is true regarding maribavir?​
12. It is contraindicated in patients < 8 years old​
13. It is FDA approved in pediatric patients ≥ 12 years of age weighing ≥ 35 kg and adults​
14. It is associated with bone marrow suppression​
15. It is an antiretroviral agent ​

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