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**INTRODUCTION**

- Patients undergoing allogeneic hematopoietic cell transplantation (allo-HCT) procedures are at increased risk of morbidity and mortality due to the presence of double-stranded DNA (dsDNA) viral infections such as cytomegalovirus (CMV).
- CMV infection may occur as early as the initial hospitalization for allo-HCT patients, regardless of whether non-relapse or relapse conditioning regimens are used. Higher risk patient populations with specific hematopoietic conditioning regimens are at an even higher risk of high-grade viremia.
- CMV infection is associated with numerous complications, most notably clinical burden.
- With effective antiviral therapy, mortality remains significant and is correlated with CMV viral load.
- There are data, especially using recent methodology, on the overall prevalence of CMV infections among allo-HCT recipients and associated clinical burden.

**METHODS**

**Study population**

- Patients who received allo-HCT between January 2009 and September 2013 were identified from the Premier hospital database by an International Classification of Diseases, Ninth Revision-Clinical Modification (ICD-9-CM) code for allo-HCT on discharge records during the initial hospitalization event. Allo-HCT recipients were grouped into two study cohorts: patients with a documented CMV viral infection during their initial allo-HCT hospitalization and those without.

**Demographics and clinical characteristics**

- Demographics and clinical characteristics were evaluated using available records in the database during the initial hospitalization and during the 12 months prior to hospitalization for allo-HCT.

**RESULTS**

- Most patients in both cohorts had a relatively low number of comorbidities, with 0–1 vs 2–5 comorbidities in the CCs (Table 1).
- The percentage of patients with major and minor acute-inpatient severity, as indicated by APR-DRG, was greater among patients with CMV infections than those without (21.9% vs 13.3%, p < 0.001) (Figure 1).
- The mean LOS for patients during the initial allo-HCT hospitalization was significantly greater among patients with CMV viral infection versus those without (29.2 ± 13.2 days vs. 19.3 ± 12.8 days, p < 0.001) (Figure 1).
- A significantly higher percentage of patients died among those who had CMV infection during initial allo-HCT hospitalization compared with patients who did not (21.9% vs. 3.3%, p < 0.001) (Figure 2).
- During hospital readmissions over the 12 months, the mortality risk is even higher than those who had CMV infection during initial hospitalization.

**LIMITATIONS**

- Identification of CMV infections was based on hospital discharge ICD-9-CM coding, which may lead to missed infections if they were not identified. Thus, the CMV infection rates estimated in this study may represent a potential underestimate of the prevalence rates of infections in each condition.

**CONCLUSIONS**

- In this large cohort of allo-HCT recipients, those who had documented CMV infections during their initial allo-HCT hospitalization had a hospital stay almost twice as long and had 10 times higher mortality during hospitalization than patients who did not.
- Because this cohort included those allo-HCT recipients who were CMV seronegative and thus at lower risk of CMV reactivation, the overall impact of CMV infections is likely to be underestimated in this study.

- Patients who had CMV infection during their initial allo-HCT hospitalization were more likely to be rehospitalized for the hospital for CMV infection recurrence.

**REFERENCES**

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**DISCLOSURES**

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