INTRODUCTION

Invasive candidiasis (IC) carries a large economic burden in the global healthcare system; candidemia is reported to have the attributable cost of ~US$40,000 per patient.

Although Candida albicans continue to be the most prevalent species, both drug-resistant Candida spp. and C. auris have emerged and been designated by the CDC as serious and urgent threats, respectively.

Echinocandins are currently recommended as empiric and/or initial therapy for IC due to their activity against most Candida species, both drug-resistant and susceptible, and favorable toxicity profile. Key challenges to managing IC involve rapid initiation of appropriate antifungal therapy and appropriate de-escalation based on microbiological data.

However, real-world data on echinocandin therapy, including indication, duration, and appropriate de-escalation are lacking.

AIM

1. To perform a pharmacoepidemiologic analysis on the current echinocandin use at two large healthcare systems in Houston, Texas, United States.

2. To assess antifungal stewardship including indication, duration of therapy, discharge disposition on the day of hospital discharge.

METHOD

Pharmacy administration and clinical microbiologic data for patients hospitalized between 2017-19 at CHI/Baylor St. Luke’s Medical Center and Memorial Hermann Hospitals in Houston, Texas, United States were screened for echinocandin use and positive Candida culture results.

Total and monthly days of therapy (DOT) per 1,000 patient days (2017-19) were calculated and the proportion of echinocandin use at two large healthcare systems in Houston, Texas, United States were screened for echinocandin use and positive Candida culture results.

Antifungal stewardship, including clinical indications, duration of therapy, de-escalation, and discharge disposition were assessed.

RESULTS

Table 1. Echinocandin courses and patients evaluated

| Number of unique patients evaluated | 1,665 |
| Total number of days of therapy | 7,820 |
| Number of patients with positive Candida microbicidal cultures | 842 (51%) |
| Days of echinocandin therapy with or without positive Candida culture | 5.5 ± 2.9 vs. 3.9 ± 2.0 (p<0.001) |
| Number of patients evaluated for echinocandin therapy | 635 |

CONCLUSIONS

The rate of echinocandin use did not change appreciably during the 2-year study period. Initiation of echinocandin therapy occurred throughout the hospitalization time-period.

A significant proportion of echinocandin courses were continued after discharge and was more common in patients with intrabdominal related infection and candidemia.

Azole non-susceptible Candida azole-related toxicity and drug interactions were common reasons for outpatient echinocandin use.

Further studies evaluating potential benefits of long-acting echinocandins in these types of patients with an emphasis on transition of care are warranted.

REFERENCES


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