
CANDIDEMIA IN HOSPITALIZED ADULTS: EPIDEMIOLOGY AND OUTCOMES IN THE UNITED STATES, 2000

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Background: Candidemia is a common cause of nosocomial bloodstream infection among adults, with a reported attributable mortality as high as 49%. There are few data on the epidemiology and outcomes of candidemia on the national level, and current studies assessing outcomes attributable to candidemia have been limited to only a few institutions.

Objectives: To estimate the incidence of candidemia in hospitalized adults within the US and to determine the attributable mortality and length of hospital stay associated with candidal infection.

Design/Methods: We conducted a retrospective cohort study using the 2000 National Inpatient Service (a 20% sample of inpatient stays from approximately 1,000 US hospitals in 28 states during 2000). Probability sampling weights were applied to generate nationally representative estimates from the data. We included hospital admissions of patients 18 years of age and older. Candidemia and comorbidities were defined by ICD-9-CM codes. Using a statistical program, we generated propensity scores for the development of candidemia to match and adjust for confounding by underlying illnesses and other covariates. We then evaluated the impact of candidemia on mortality and length of stay.

Results: The estimated national incidence of candidemia in adults is 30 cases per 100,000 admissions (95% CI: 26 -34/100,000). The median age of those with candidemia was 65 years, compared to 58 years among the entire population. Among those with candidemia, 23% had a reported neoplastic process, 19% had diabetes, 13% were on hemodialysis, 31% were on mechanical ventilation, 6% had a cardiovascular condition, and 4% had a hematological or immunological deficiency. The crude mortality rate among adult admissions with candidemia was 31%. After adjusting for propensity scores, the mortality attributable to candidemia was 14%. Candidemia also resulted in an 8.1-day increase in mean length of hospital stay.

Conclusions: In this nationally representative study, candidemia in adults is associated with a significantly increased risk of death and excess hospital stay, which has been previously reported in the pediatric population. More effective methods of prevention, recognition, and treatment for candidemia are needed to reduce mortality and morbidity burdens on those affected.