

Incidence, Risk Factors, And Outcomes Of Pseudomembranous Colitis In Hospitalized Patients: A Three-year Retrospective Study In Yemen

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BACKGROUND

Pseudomembranous colitis (PMC), primarily caused by Clostridium difficile infection (CDI) after antibiotic use, is a severe colon inflammation with mortality rates of 6–30% globally. This study evaluates PMC's incidence, risk factors, and outcomes among hospitalized patients in Yemen, where CDI is underreported.

METHODS

This three-year retrospective cohort study analyzed the records of 1,360 patients hospitalized for over 7 days and treated with antibiotics. The cohort included 470 pediatric patients initially misdiagnosed with cholera. We examined the development of PMC, focusing on treatment outcomes and complications. Logistic regression was used to identify risk factors for severe PMC and mortality.

RESULTS

Among the 1,360 patients, 51.5% (700) developed severe PMC requiring IV vancomycin and metronidazole, while 13.9% (190) experienced less severe cases responding to oral treatment. Of the pediatric patients, 34.6% (470) developed diarrhea, initially misdiagnosed as cholera but later confirmed to be PMC, with 20.2% (95) requiring prolonged treatment due to fatal systemic complications. Overall mortality was 3.3% (45/1360), significantly higher in severe PMC cases (6.4%, 45/700) due to septic shock ($p < 0.05$). The findings align with global reports showing high mortality in delayed treatment and severe cases of PMC

CONCLUSION

Severe pseudomembranous colitis poses a significant challenge in hospitalized patients, particularly in resource-limited settings and poor healthcare systems like Yemen. Prolonged antibiotic use, misdiagnosis, and delayed treatment contributed to the severity of the condition. Mortality was especially high due to catastrophic systemic complications and misdiagnoses, emphasizing the need for better diagnostic protocols, extreme hygiene enforcement, and timely interventions to mitigate the impact of PMC