Clinical Risk Factors for Severe Clostridium difficile-associated Disease

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CME ACTIVITY

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Learning Objectives

Upon completion of the activity, participants will be able to:

1. Identify the criteria used to define severe Clostridium difficile-associated disease (CDAD) in the current study

2. Specify the prevalence of severe CDAD in the current study

3. Identify the clinical risk factors for severe CDAD

4. List the laboratory risk factors for severe CDAD

Editor

5-Year Member, Technical Writter-Editor, Emerging Infectious Diseases. Disclosure: Lynn Beutler has disclosed no relevant financial relationships.

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Identifying patients who are at high risk for severe Clostridium difficile-associated disease (CDAD) early in the course of their infection may help clinicians improve outcomes. Therefore, we compiled clinical features associated with severe versus nonsevere CDAD by retrospectively reviewing records of hospitalized patients whose local ascents were positive for C. difficile toxin A or B. 336 patients, 12% had severe disease and 10.1% died from causes related to their illness. Regression modeling showed the following to be significant:

• Severe CDAD (odds ratio [OR] 2.05; p < .01) was more likely in patients with age >70 years (odds ratio [OR] 2.47, 95% confidence interval [CI] 1.29 to 4.69), severe illness (OR 2.47), admission from long-term care facilities (OR 1.90), creatinine >2 mg/dL (OR 2.97), and minimum albumin level <2 g/dL (OR 3.44), and those in whom C. difficile was isolated (OR 2.47), with bowel obstruction or ileus (OR 3.08), and computed tomography (CT) scan findings of acute inflammation. These clinical and laboratory markers for severe disease

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DOI: 10.2334/aihm.10080312

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Article Title

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CME Questions

1. All of the following were criteria for severe Clostridium difficile-associated disease (CDAD) in the current study, except:

A. One or more intensive care unit admissions in which C. difficile was a major contributor

B. Prolonged symptoms past 14 days requiring intravenous fluid replacement

C. Colonization of another surgery directly attributed to C. difficile

D. Intestinal perforation in the setting of C. difficile disease

2. What was the prevalence of severe CDAD among all of the cases of CDAD in the current study?

A. 1%

B. 12%

C. 29%

D. 44%

3. Which of the following patient factors was most associated with an increased risk for severe CDAD on multivariate analysis of the current study?

A. Age >70 years

B. Chemotherapy use

C. Antimicrobial use

D. Previous hospital stay

4. All of the following laboratory factors were predictive of an increased risk for CDAD in the current study, except:

A. White blood cell count >20,000/µL

B. Serum albumin <2.5 g/dL

C. Creatinine >2 mg/dL

D. Alamine transaminase >40 U/L

Activity Evaluation

1. The activity supported the learning objectives. Strongly Disagree 3 4 Strongly Agree 5

2. The material was organized clearly for learning to occur. Strongly Disagree 2 3 Strongly Agree 4

3. The content learned from this activity will impact my practice. Strongly Disagree 2 3 Strongly Agree 4

4. The activity was presented objectively and free of commercial bias. Strongly Disagree 1 2 Strongly Agree 5

Emerging Infectious Diseases • www.cdc.gov/eid • Vol. 15, No. 3, March 2009

5/16