Prognostic factors of mortality and complications of *Clostridium difficile* infection in elderly patients

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INTRODUCTION

Most cases of *Clostridium difficile* infection (CDI) occur in patients older than 65 years. Older age is associated with increased mortality. The characteristics of CDI in a group of elderly patients is described.

MATERIAL AND METHODS

- **Retrospective cohort study**
  - **Period:** January 2014 – November 2016
  - **Patients:** All patients older than 65 years with CDI hospitalized
  - **Data collected:**
    - Demographic characteristics, past medical history, CDI description
    - Exposure to risk factors associated with CDI within 8 weeks before CDI, including previous hospitalization, nursing home residency, antibiotic treatment, antisecretory drugs, and surgical procedures.
  - **Samples:** Stool samples

- **Detection of *Clostridium difficile***
  - **Techniques:**
    - Antigen detection: Cdiff QuickChek Complete (TechLab, EEUU)
      - Immunoassay to detect:
        - GDH > *C. difficile*
        - TcdA and TcdB > Toxigenic strain of *C. difficile*
    - Genome detection: GenomEra CDX System *C. difficile* (Abacus Diagnostica, Finland)
      - PCR assay to detect:
        - Gen tcdB > Toxigenic strain of *C. difficile*

- **Algorithm:**

RESULTS

- **Patients:** 84 patients older than 65 years with CDI hospitalized
  - Mean age: 77[8] years
  - Males: 60.7 %
  - Mean stay of infection in Spain: 8 [14] days

- Prior to CDI, 64 patients (76.2%) were exposed to antibiotics.

- All infections except four was nosocomial.

- The most frequent symptoms were diarrhea (100%), abdominal pain (46.4%) and fever (45.2%).

- Nine patients developed a complication (8 patients a colitis and 1 patient an ileus). The presence of complications was more frequent in patients treated with vancomycin enemas in monotherapy (p=0.030, OR:20.8 [1.674-259]) and in those with abdominal pain (p=0.013, OR: 9.39 [1.173-83.57]).

- Mortality was significantly more frequent in patients with elevated levels of leucocytes (18[15] vs 13[27], p= 0.001) but there is no differences in sex, age, treatment with metronidazole or vancomycin or serum C-reactive protein levels.

CONCLUSIONS

*Clostridium difficile* infection is an important cause of complications and mortality in elderly patients associated to treatment with vancomycin enema in monotherapy, and high levels of leucocytes.