

POSTER PRESENTATION

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Incidence, risk factors, clinical and microbiological characteristics of clostridium difficile associated diarrhea in spanish critically ill patients (procrd study)

L Martin-Villen^{1*}, A Gutierrez-Pizarra², L Alcala-Hernandez³, M Marin-Arriaza³, B Balandin-Moreno⁴, C Aragon-Gonzalez⁵, J Ferreres-Franco⁶, MA Chiveli-Monleon⁷, MP Anguita-Alonso⁸, E Bouza-Santiago³, J Garnacho-Montero¹

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Objectives

C. difficile (CD) is the first pathogen responsible of nosocomial diarrhea. Our aim was to study the epidemiology and factors associated with the development of CD infection (CDI) in patients admitted in the Critical Care Units (CCU) of our country.

Materials

Multicenter, prospective, observational study from February 3rd to April 3rd, 2014. We included all adult critically ill patients of 26 CCUs of Spain who had diarrhea¹. All feces samples were sent to the reference laboratory and we considered CDI when cytotoxicity in cell culture or toxigenic culture were positive. The ribotypes were determined by PCR.

Incidence of CDI, clinical characteristics, possible risk factors and ribotypes were studied. For the bivariate analysis, the Chi-square test was used for qualitative variables and Student t-test or Mann Whitney U for quantitative. Multivariate analysis was performed using logistic regression to identify factors independently associated with the development of CDI.

Results

In the study period, 7196 patients were admitted in the participating units, 190 (2.6%) had diarrhea and of them, 16 were positive for CD, representing a CDI incidence of 0.22%. 95.8% patients received antibiotics previously and

only 2 patients (1.1%) had previous history of CDI. There was no difference in the severity measured by APACHE II [17 (13-19) vs. 20 (16-25); $p = 0.723$] or the crude mortality (40 vs. 30.6%; $p = 0.555$) between patients with or without CDI.

CDI patients had a median age of 66 years, 43.8% were women and they had an income APACHE II median of 17 points. COPD (37.5%) was the most frequent comorbidity. CDI was a mild-moderate disease in the 64.3% of cases, 31.2% of the CDI patients had complications, 15.4% had recurrence and only one death was directly attributed to the CDI. The most frequently isolated ribotype was 078/126 (25%) and 027 were identified only in 2 cases (12.5%).

There were no differences in clinical presentation, previous use of ATB, use of inhibitors of proton pump, mechanical ventilation and parenteral nutrition among groups. Prevalence of chronic kidney disease (CKD) was significantly higher in infected patients (31.3% vs 7.1%; $p = 0.08$) and by multivariate statistical analysis it was identified as the only factor independently associated with the development of CDI [OR 5.87 (1.24-27.83) 0.026].

Conclusions

Despite using the clinical criteria of diarrhea¹, the incidence of CDI in our population is very low.

We have identified several ribotype of CD including two cases of 027.

We only have identified the chronic kidney disease as a risk factor independently associated with the development

¹Hospital Universitario Virgen del Rocío, Critical Care, Seville, Spain
Full list of author information is available at the end of the article

of CDI whereas the previous use of antibiotic seems not to directly influence the development of CDI.

Authors' details

¹Hospital Universitario Virgen del Rocío, Critical Care, Seville, Spain. ²Spanish Network Research in Infectious Diseases (REIPI), Seville, Spain. ³Hospital Universitario Gregorio Marañón, Microbiology, Madrid, Spain. ⁴Hospital Puerta de Hierro, Critical Care, Madrid, Spain. ⁵Hospital Carlos Haya, Critical Care, Malaga, Spain. ⁶Hospital Clinico Universitario, Critical Care, Valencia, Spain. ⁷Hospital Universitario La Fe, Anesthesia and Resuscitation, Valencia, Spain. ⁸Astellas Pharma S.A., Madrid, Spain.

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