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1 Introduction

Clostridium difficile infection rates and severity have been related with the emerging of hypervirulent toxigenic strain B1/NAP1/027. This strain has been linked to outbreaks in North America, Europe and most recently in Latin America. The objective of this study was to describe the prevalence of *C. difficile* strain BI/NAP1/027 among patients in Cali-Colombia.

2 Methods

Between January 2012 and May 2016, adult patients with Hospital-acquired diarrhea were screened for *C. difficile*. We reviewed medical records and laboratory values from the patient electronic medical chart. Molecular diagnosis of *C. difficile* strains was made through real-time polymerase chain reaction for detection of the toxin B gene, binary toxin gen and tcdC 117 nucleotide (GeneXpert; Cepheid, CA, USA).

3 Results

A total of 337 adult patients with Hospital-acquired diarrhea were screened. Patient characteristics are shown in table # 1. Previous use of antibiotics was observed in 86% of patients. The diagnosis of *C. difficile* was made in 48 patients (12.2%); 14 tested positive for the BI/NAP1/027 strain (29.2%).

Results

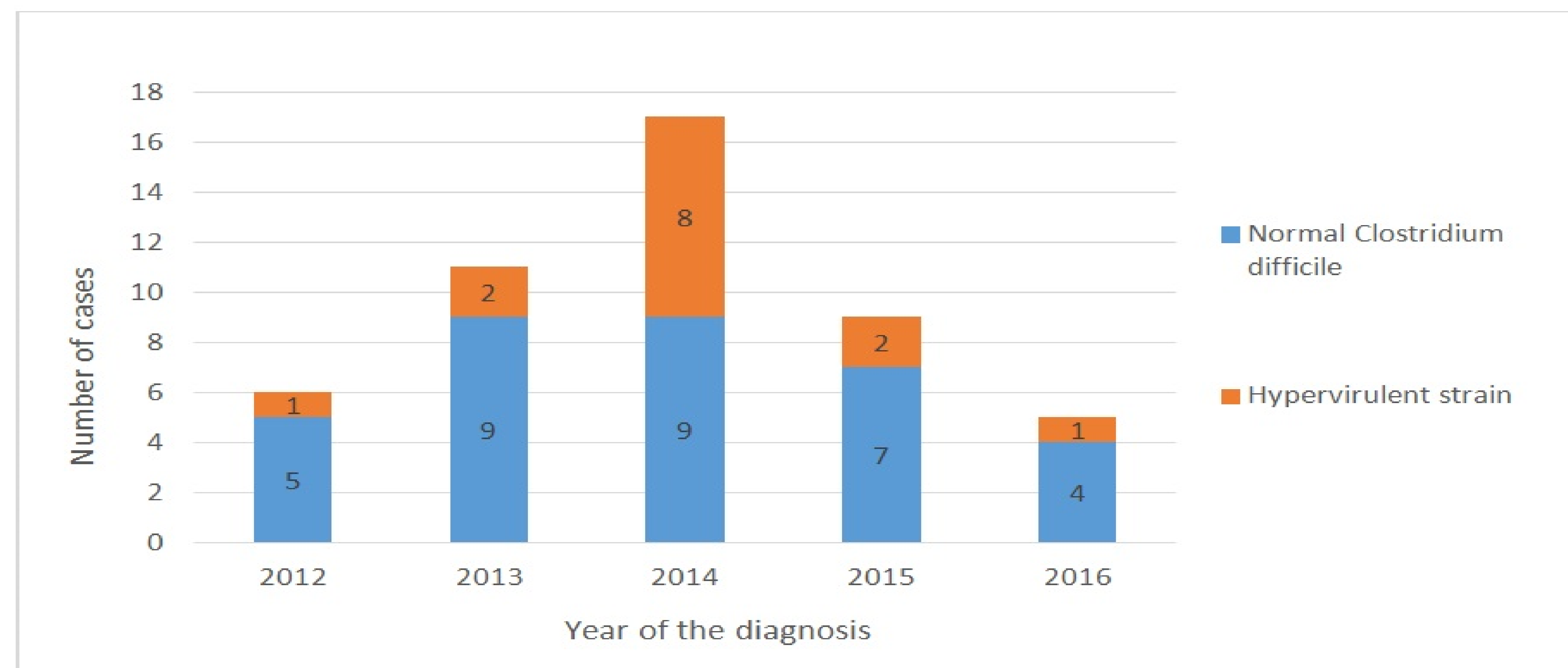


Figure # 1 Number of cases of Clostridium difficile per year.

Characteristic	Number	Percentage
Age (Years)	61	(25-87)
Females	8	57%
Diabetes	2	14
Cardiovascular Disease	7	50
Cirrhosis	3	21
Acute kidney injury	4	29
Malignancy	4	29
Peptic ulcer	1	7
Rheumatologic Disease	3	21
Organ transplant	2	14

Comorbidity/Outcome	Number	Percentage
Pseudomembranous Colitis	3	21%
Ileus	2	14%
Colostomy/ileostomy	1	7%
Intestinal Perforation	1	7%
Relapse	1	7%
Recovery	10	71%
Mortality	3	21%

92% of the cases were classified as severe (CDC score). Three patients died; two directly to *C. difficile* 027 strain infection (14.3%) and the other from an acute myocardial infarction (Table # 2). Figure # 1 illustrates the number of cases per year. The hospital registered an epidemic in the Clostridium difficile strains in 2014.

4 Conclusions

Although the proportion of patients with *C. difficile* in this study was low, almost one-third of them were tested positive for BI/NAP1/027 strain, which is higher compared to other studies performed in different parts of the world.

Emerging prevalence of hypervirulent strains could be a significant threat not only in Europe or North America but also in Latin America.

Our findings support the presence of this emerging strain in Colombia.

5 References

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