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LETTERS TO THE EDITOR

Chemoprophylaxis in the prevention of *Clostridium difficile* infection: Still a ways to go☆

Quimioprofilaxis en la prevención de infección por *Clostridium difficile*, un camino por recorrer

Dear Editors:

Clostridium difficile infection (CDI) in hospitalized patients is an event with a high impact on morbidity and mortality, as well as on healthcare costs. With respect to this, the *Revista de Gastroenterología de México* consistently publishes important articles written by medical personnel with different degrees of training. As part of ECOS 2016, Icaza-Chavez's paper ''Current Information on *Clostridium difficile* infection'' was published.[1] It contained notes on interesting developments in the treatment of that pathology, most of which correlated with later publications. However, in the Prevention section, he cited the work of Fischer et al.[2] that was presented at an oral session of the 2016 Digestive Disease Week, and somewhat unclearly, concluded that a reduced risk for presenting with CDI could not be demonstrated through antibiotic use. What Fischer et al. had indeed stated was that in patients with successful fecal microbiota transplant, recurrence associated with antibiotic use not directed at CDI treatment was low (6.5% [6/152]); they did not describe antibiotic use directed at CDI treatment (vancomycin and metronidazole), or the use of probiotics, as either a success or failure.

We feel that the reader should not be left with the conclusion expressed by Icaza-Chávez, because by that date, articles had been published that directly related the role of chemoprophylaxis to promising results. Van Hise et al.[3] conducted a study using oral vancomycin for the prevention of CDI recurrence in which 113 patients were given a 250 mg or 125 mg dose twice a day, compared with 132 that were not given the drug. They found that CDI recurrence presented in 4% of the patients that received prophylaxis and in 27% of the patients that did not receive prophylaxis. With respect to metronidazole, Rodríguez, et al.[4] retrospectively described the efficacy in primary prevention of that medication in high-risk adult patients (defined as those older than 55 years of age, receiving a broad-spectrum antibiotic and a gastric acid suppressant). They found that incidence was 1.4% in the group of patients receiving metronidazole as treatment for causes other than CDI, and it was 6.5% in the group that did not receive the drug. Those authors concluded that receiving metronidazole reduced the incidence of *Clostridium difficile*-associated hospital diarrhea by 80%.

From the last months of 2016 to the present, articles continue to be published that provide evidence suggesting the use of chemoprophylaxis in both the primary and secondary prevention of CDI recurrence. They show it to be a highly cost-effective measure in centers that have not achieved adequate control, despite applying the prevention recommendations. At present, all of us agree that this measure is still in its beginning stages and that prospective studies with adequate quality methodology are required to allow its future recommendation in selected patients.

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Conflict of interest

The authors declare that there is no conflict of interest.

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Response to Dr. Tobar-Marcillo and his coauthors: ''Chemoprophylaxis in the prevention of *Clostridium difficile* infection: Still a ways to go''☆

Respuesta al Dr. Tobar-Marcillo y a sus coautores: «Quimioprofilaxis en la prevención de infección por *Clostridium difficile*, un camino por recorrer»

Dear Editor:

I appreciate the interesting comments made by Tobar-Marcillo et al. in their Letter to the Editor ''Chemoprophylaxis in the prevention of *Clostridium difficile* infection: Still a ways to go''.[1] As Dr. Tobar correctly states, the retrospective study by Rodríguez et al.[2] showed that primary anti-*Clostridium difficile* (CD) prophylaxis prevented CD infection (CDI) in individuals at high risk for said infection that took antibiotics, and the retrospective study by Van Hise et al.[3] demonstrated that antibiotics used as anti-CD prophylaxis in individuals that already presented with CDI and that required antibiotic treatment for a different indication, prevented a subsequent CDI attack.

Fischer et al. [4] considered the work presented at the 2016 DDW relevant, because the long-term risk for CDI recurrence after successful fecal microbiota transplant (FMT), with or without exposure to an antibiotic nonspecific for CDI, is unknown. They also stated that the prophylactic use of anti-CDI antibiotics (vancomycin, metronidazole, or fidaxomicin) or probiotics in patients with those characteristics is not known, making the administration of those antibiotics or probiotics for that indication a subject of debate. By means of a personal communication, Allegretti, a coauthor of the Fischer study, commented to me that the work presented in the poster session (Tu1914) at the 2017 DDW in Chicago is the continuation of the study mentioned by Dr. Tobar.

Fischer et al.[5] conducted a multinational, retrospective study in the United States and Canada on 426 patients that received successful FMT for CDI. The overall reinfection rate was 10.3%, and it was 18.3% after the use of non-anti-CD antibiotics. Specifically, the reinfection rate was 31% with fluoroquinolones, 19% with cephalosporins, and 15% with amoxicillin/amoxicillin-clavulanate. Interestingly, CD reinfection with the prophylactic use of anti-CD antibiotics, together with non-anti-CD antibiotics, was 27.8%, versus 14.3% without their use ($p = 0.12$). Reinfection was 27.5% with the use of probiotics versus 13.8% without their use ($p = 0.08$). The risk was significant and greater with the use of probiotics plus anti-CD antibiotics than without their use, at 46.7% versus 14.3%, respectively ($p = 0.007$). Therefore, the authors concluded that prophylactic anti-CD antibiotics or probiotic use in patients with previous FMT did not reduce the risk for CDI recurrence. Those results are surprising, and as the authors suggest, a prospective study is necessary to demonstrate their data.

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The authors declare that there is no conflict of interest.

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