**Clostridium difficile Colitis after Forced Anal-Receptive Intercourse**

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Colitis caused by *Clostridium difficile* toxin has been reported in homosexual men. We report a case of *C. difficile* colitis that occurred in an immunocompetent heterosexual man after forced anal-receptive intercourse.

*Clostridium difficile* toxin is most commonly associated with antibiotic-induced diarrhea [1, 2]. However, disease associated with *C. difficile* toxin has also been identified in the absence of antibiotic use—for example, in intestinal infections in homosexual men ("gay bowel syndrome") [3] and in patients receiving chemotherapy for cancer [4, 5], and a severe case was reported after paclitaxel and carboplatin administration [6]. We describe an immunocompetent host with *C. difficile* colitis that developed after anal sexual assault.

**Case report.** Three days after a sexual assault involving forced anal-receptive intercourse, a 30-year-old homosexual man presented with suicidal ideation, diarrhea, nausea, and vomiting. He had a past medical history of posttraumatic stress disorder secondary to rape at the age of 15 years, no history of HIV infection, and no history of recent use of antibiotics or other medications. At the time of admission to the psychiatric ward, the patient was afebrile (temperature, 37.0°C), and the findings of a physical examination were unremarkable, including soft, nontender abdomen with no organomegaly. His WBC count was 11,900 cells/mm³ (74% neutrophils). He started receiving therapy with olanzapine, sertraline, and zolpidem. The patient tested negative for HIV antibody, hepatitis B surface antigen, hepatitis B core and surface antibodies, hepatitis C antibody, and rapid plasma reagent. In addition, HIV-1 RNA was undetectable by PCR (lower limit of detection, <400 copies/mL), ruling out acute HIV infection. No information was available on the medical history and recent medication use of the perpetrator.

Eleven days after admission to the psychiatric ward (14 days after the sexual assault), the patient began complaining of abdominal pain; 3 days later, he had 2 episodes of vomiting and 6 episodes of green, mucus-containing diarrhea. The patient had worsening leukocytosis (WBC count, 15,800 cells/mm³; 90% neutrophils). The following day, the patient had a low-grade fever (temperature, 37.4°C). Stool samples tested positive for *C. difficile* toxins A and B with use of an enzyme immunoassay. Orally administered metronidazole (500 mg q8h) was initiated, and the patient was treated for 15 days. The day after the start of therapy, the patient defervesced, and his WBC count decreased to 7900 cells/mm³ (59% neutrophils). After 15 days of metronidazole therapy (day 33), the clinical symptoms of abdominal pain, diarrhea, nausea, and vomiting resolved, and stool samples tested negative for *C. difficile* toxin. The patient’s clinical course is detailed in table 1.

**Discussion.** In patients with sexually transmitted diseases (STDs), there is a high rate of colonization with *C. difficile* in the male and female genital tract. At an STD clinic in Sheffield, United Kingdom, 106 women (72%) who presented at the clinic were colonized with *C. difficile* in the vaginal tract, and 42 men (100%) were colonized with *C. difficile* in the urethra. By contrast, only 18% of 210 women who attended a family planning clinic had vaginal colonization with *C. difficile*, and none of 50 men in a general urology clinic had urethral *C. difficile* colonization [7]. At another STD clinic, 21% of women presenting for the first time had vaginally colonization with *C. difficile* [8]. Other investigators, however, found little to no colonization in such women. The presence of *C. difficile* bacteria in the genital tracts of patients with STDs suggests that the organism itself can be transmitted sexually.

Intestinal infections are common in homosexual men. A wide spectrum of enteric pathogens have been observed in immunocompetent individuals, as well as in HIV-infected patients [3, 9]. In a study of homosexual men who presented with diarrhea or proctitis, 64% of symptomatic patients were HIV positive, as determined using a serological assay, but their conditions did not conform to the clinical definition of AIDS. An organism was identified in 63% of cases, most commonly herpes simplex virus (in 22%), *Campylobacter* species (in 19%), *Neisseria gonorrhoeae* (in 13%), *Giardia lamblia* (in 10%), and *Chlamydia trachomatis* (in 9%). *C. difficile* toxin was identified in 4.5% of cases. In the same study, a similar spectrum of enteric
organisms was found in patients with AIDS who presented with diarrhea, but the incidence of Cryptosporidium infection was much higher (16% for patients with AIDS vs. 3% for patients without AIDS). C. difficile cytotoxin was found in 7.1% of patients with AIDS who had diarrhea [3].

Infections with C. difficile (without cytotoxin implication) have been reported in the female genital tract. C. difficile was isolated, usually in combination with other anaerobes, from a total of 34 women with vaginal abscess, pelvic abscess, perinatal sepsis, ovarian abscess, or endometritis or who had experienced septic abortion [8].

To our knowledge, this report represents the first case of an immunocompetent heterosexual man who developed C. difficile colitis after forced anal-receptive intercourse. There is a considerable rate of male urethral colonization with C. difficile in the setting of STDs. Therefore, male-to-male sexual transmission of C. difficile, possibly resulting in cytotoxin-related colitis may be more common than has previously been appreciated. For patients who present with diarrhea and abdominal symptoms after anal-receptive intercourse, clinicians should consider sexually transmitted C. difficile colitis in the differential diagnosis.

References