Clostridium difficile arising in a patient with hidradenitis suppurativa on clindamycin and rifampin

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Abstract

We report a case of *Clostridium difficile* infection in a patient with hidradenitis suppurativa who was taking clindamycin and rifampin. *Clostridium difficile* infection treatment prompted discontinuation of the medication. *Clostridium difficile* infection is known to develop after antibiotic treatment, such as clindamycin, but has rarely been associated with anti-tuberculosis agents, such as rifampin. Clinicians should be aware of the risk of *Clostridium difficile* infection in patients with hidradenitis suppurativa, even in those receiving rifampin.

Keywords: hidradenitis suppurativa, rifampin, clindamycin, Clostridium difficile infection, diarrhea

Case Synopsis

We present a 63-year-old obese woman with hidradenitis suppurativa (HS) who began treatment with clindamycin and rifampin at 300mg twice a day, topical gentamicin cream, and dapsone gel, who subsequently developed *Clostridium difficile* infection (CDI). She had a history of type 2 diabetes, hypertension, hyperlipidemia, depression, migraine headaches, sleep apnea, and thyroid disease. Therefore, at the time treatment began she was taking atenolol, lisinopril, rosuvastatin, solifenacin, and aspirin. She also had a surgical history which consisted of: an appendectomy, cholecystectomy, adjustable gastric band, and abdominal hernia repair. After 15 weeks on the antibiotics she was admitted to the emergency room (ER) with a chief complaint of weakness, nausea, vomiting, headaches, and diarrhea over the preceding two weeks. She was given morphine 4mg, two doses of ondansetron 4mg, metoclopramide 10mg, two doses of metronidazole 500mg, two doses of vancomycin at 125g and 125mg, and acetaminophen liquid 80mg/0.8ml (dose 10mL). A stool sample tested positive for *Clostridium difficile*.

Owing to *Clostridium difficile* infection, the patient's physician put her on a 10 day course of oral vancomycin 250mg capsules, four times a day. Patient was admitted to the ER after failing treatment with a 14 day course of metronidazole and inability to tolerate oral vancomycin capsules, because of adjustable gastric band and liquid not being available. Therefore, the ER gave an oral syringe of vancomycin 125mg and the patient was given vancomycin for six weeks. She was then seen by an infectious disease physician who suspected she suffered from post infectious irritable bowel syndrome seven months following and recommended avoidance of antibiotic therapy unless absolutely necessary with the most-narrow spectrum therapy available.

Case Discussion

Clostridium difficile infection is known to develop after antibiotic treatment, such as clindamycin, but has rarely been associated with anti-tuberculosis agents, such as rifampin [1]. A study indicated that when the use of clindamycin, an antimicrobial agent

with the potential to induce CDI, has been restricted it leads to a reduction in CDI [2]. It is noted that rifampin, although not first line, is an effective treatment of CDI and therefore, decreases the likelihood of the onset of CDI from clindamycin [3]. Several studies have demonstrated the efficacy of rifampin in the treatment of CDI [4]. However, resistance to rifampin has also been reported. In one study of 180 isolates of pathogenic CD only 10% were resistant to rifampin [3]. Furthermore, the rate of overall resistance, 11% of CDI clinical isolates resistant to rifampin, appears to be rising [5]. Prior exposure to rifampin [5] and prolonged use of rifampin [1] has been reported to be risk factors of rifampin resistant CDI. Few studies have discussed the risk of developing CDI in patients receiving rifampin. Clinicians should be aware of the risk of CDI in patients with HS, even in those receiving rifampin.

References

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