Implication of Clostridium difficile Strain Typing in Recurrent C. difficile Infection

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Abstract

Introduction: Recurrent Clostridium difficile infection (CDI) is a debilitating problem. We sought to determine if patients in our healthcare system had relapsing disease or reinfection.

Methods: Stool was archived beginning in February 2015. Patient strains are repeatedly the same), or infecting a new system or the introduction of a new clone, 3 of 4 were strains we had not seen previously, the same strain type to our baseline data found only 5 (20%) were the same. To test this we did PCR typing by PCR ribotyping. When C. difficile was recovered from both samples was prepared for PCR ribotyping.

Background

Multiple bouts of Clostridium difficile infection is a debilitating problem for patients. In order to help address the issue, we sought to determine if patients in our healthcare system had relapsing disease or reinfection by analyzing the strain types of the bacteria causing disease. Typing C. difficile isolates from stools of patients who had positive tests >60 days apart. The number of patients with different strain types was significantly greater than the number of patients with the same strain type, infection prevention measures for C. difficile would be recommended.

Results

Fifty-one C. difficile isolates from 25 patients with recurrent disease were typed. Of the 23 patients, 21 (84%) had a second infection with the same strain and 4 (16%) had a different strain type (Table 1). Twenty-one patients (84%) had a second infection with the same strain type to our baseline data found only 5 (20%) were the same. To test this we did PCR typing by PCR ribotyping. When C. difficile was recovered from both samples was prepared for PCR ribotyping.

Conclusion

Majority of the patients tested in this timeframe had recurring disease. Persisive strain typing of C. difficile isolates can help focus infection control efforts.

References
