Incidence of Clostridium Difficile infections in patients receiving antimicrobial and acid-suppression therapy

Jeanette Andersson and Christoffer Angel
Group 12
Goal of the study

- To establish if concomitant use of antibiotic and acid-suppression drugs are risk factors for development of Clostridium Difficile infection.
The study

- Retrospective study
- Medical record review
- 350-bed community hospital
- 11,010 admissions between January 1, 2009 and December 31, 2009.
Method

- Identifying patients with stool samples positive for C.Difficile toxin A or B.
- Compare the incidence with the national estimated incidence in 2008.
Results

- Of the 11010 admissions, 115 patients had a positive stool sample for C.Difficile.
- 10.4 cases /1000 patient admissions at the community hospital.
- The overall national incidence in 2008 were 13.1 cases/1000 patient admissions.
- It was more common among women and elderly to develop CDI, and they were more likely to develop it during hospitalization.
Results

- 95 of the 115 patients received acid suppression therapy and 91 received antibiotics.

- Out of the 95 cases that got acid-suppression therapy, 51% received both a proton pump inhibitor and an antibiotic.
Results

- Patients receiving carbapenems developed CDI more frequently compared to the other classes.

- Patients who received both antibiotics and acid-suppression therapy were more likely to develop CDI than those who did not take these drugs.
Conclusion

- Combinations of fluoroquinolones, cephalosporins, carbapenems and proton pump inhibitors were identified as risk factors for development of CDI in hospitalized patients.
Source