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Abstract (poster session)

Clostridium difficile in Crete, Greece: epidemiology, microbiology and clinical disease

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Objective: To study the epidemiology, microbiology and clinical disease of *Clostridium difficile* in a tertiary centre in Crete, Greece. **Methods:** All *C. difficile* isolates between 2004 and 2010 in the University Hospital of Crete were recorded. Direct tests were used to assess production of toxins A and B. The epidemiology and resistance pattern of *C. difficile* was studied. Three groups of patients with diarrhea (group 1: positive culture and toxin; group 2: positive culture but negative toxin; group 3: negative culture and toxin) were compared after matching patients in 1:2 ratio for age, gender, year of isolation and department of admission. **Results:** Out of 4379 clinical stool specimens examined for *C. difficile*, 263 (6%) turned positive and in 38 of them (14%) the toxin assay was positive. All isolates were resistant to cephalosporins; 86% were resistant to clindamycin, 41% to erythromycin, 19% to rifampicin, 18% to tetracycline, and 5% to chloramphenicol. 22%, 14%, and 8% isolates had intermediate susceptibility to erythromycin, tetracycline and chloramphenicol, respectively. Vancomycin (1%), ampicillin (2%), and metronidazole (3%) had the lower resistance. Data for 20 patients in group 1 was available and matched with 40 patients in each of groups 2 and 3. There were no differences between patients in the compared groups for co-morbidity and prior hospitalization. Patients in groups 1 and 2 received more antibiotics ($p=0.031$) and had more infectious episodes ($p=0.028$) than patients in group 3 prior the development of diarrhea. Patients in group 1 received more commonly parenteral nutrition ($p=0.009$) but fewer proton-pump inhibitors ($p=0.031$) and had fever ($p=0.007$) and concurrent infections less commonly ($p=0.003$) than patients in groups 2 and 3. Patients in group 2 were more likely to have a nasogastric tube in place ($p=0.033$) and a history of angiotensin converting enzyme inhibitor or angotensin receptor blocker intake ($p=0.016$) than patients in groups 1 and 3. Antibiotic treatment for *C. difficile* infections did not differ between groups 1 and 2. **Conclusion:** *C. difficile* infection seems rare in Greece. Isolates are highly susceptible to both metronidazole and vancomycin. Patients in group 1 had similar history of antibiotic administration and hospitalization to patients in group 2, but differ in other characteristics including nutrition pathway, administration of proton-pump inhibitors and concurrent infections.