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Infection Control: Clinical epidemiology of nosocomial infections

Investigation of the incidence of *Clostridium difficile* in nosocomial diarrhoea

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**Objectives:** To determine the *Clostridium difficile* (*C. difficile*)-associated nosocomial diarrhoea incidence, resistance status of *C. difficile*, diagnostic and therapeutic approaches. **Methods:** This prospective clinical study included 100 diarrhoea samples that were sent to microbiology laboratory or directly taken from hospitalized patients. The diarrhoea samples were investigated by culture, card test and ELISA methods and bacterial resistance profile was shown with the E-test method. **Results:** Toxin A/B was found positive at 30/100 patients (30%) by ELISA. The duration of hospitalization and diarrhoea period were significantly longer in Toxin A/B positive patients than negative patients ( $p < 0.05$ ). Recurrences detected in 41% of Toxin A/B positive patients (Statistically not significant but clinically may be important). When ELISA accepted as the gold standard test, sensitivity and specificity of culture and card test methods found as 56%, 75% and 76%, 80% respectively. The *C. difficile* resistance rates were determined for metronidazole as 29.4%, for vancomycin and teicoplanin as 2.9%. **Conclusions:** Our results support that the *C. difficile* is still an important factor in nosocomial diarrhoea. Furthermore, highness of antibiotic resistance for metronidazole may be caused by difficulties in treatment. The results indicate the necessity of further studies to develop control measures and effective treatment options for patients.