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Poster Session III

Clostridium difficile: epidemiology and outcomes

POLISH SURVEILLANCE PROGRAMME OF CLOSTRIDIUM DIFFICILE INFECTIONS REVEALS PERSISTENTLY HIGH PREVALENCE OF CLOSTRIDIUM DIFFICILE TYPE 027.

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Objective. *Clostridium difficile* is recognized as the principal cause of infectious diarrhea in hospitalized patients. The worldwide emergence of *C. difficile* PCR ribotype 027 has been linked to an increased use of fluoroquinolones. *C. difficile* type 027 and the closely related type 176 are highly resistant to newer fluoroquinolones. Stimulated by the ECDC capacity building network of CDI (ECDIS-net) we developed a surveillance programme, which started in 2012 year, to assess the incidence of hospitalized patients with CDI in Poland and to characterize *C. difficile* isolates.

Methods. We randomly selected 12 hospitals and microbial laboratories from different parts of Poland to participate in this programme. The laboratories were requested to determine the CDI incidence in 2013 and to collect *C. difficile* isolates during a prospective survey in February and March 2013. *C. difficile* isolates were cultured from three to ten consecutive - positive tested stool samples, obtained in routine diagnostics (February and March 2013). Isolates were sent to the Department of Medical Microbiology, MUW, Poland for PCR-ribotyping and susceptibility testing for moxifloxacin, clindamycin, metronidazole and vancomycin.

Results. The mean incidence of CDI in Polish hospitals in 2012 was 7,1/10.000 patient-days and has increased compared to 2011 (3,6/10.000). A total 92 *C. difficile* isolates were collected, of which 84 were available for antibiotic susceptibility testing. Of 84 CD strains, 60 strains revealed high level resistance to moxifloxacin (MIC \geq 32 mg/L) and 15 to clindamycin (MIC \geq 256 mg/L). Of these, 47 isolates belonged to type 027 and 4 to type 176. All strains were susceptible to vancomycin and to metronidazole, according to EUCAST criteria.

Conclusion. The incidence of CDI has increased in Poland. We concluded that the epidemic agent of CDI in Poland has not changed in comparison to the results of the first Polish survey of CDI performed in 2012. *C. difficile* PCR-ribotypes 027 and 176 remain the predominant types.

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