P0259 Adherence to the treatment guidelines for *Clostridium difficile* infection and comparison of treatment outcomes of the first non-severe disease episode between oral metronidazole and vancomycin group: a single tertiary centre retrospective study

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**Background:** Management guidelines were established in order to improve disease outcomes of *Clostridium difficile* infection (CDI); however, recent studies suggest inferiority of oral metronidazole in the treatment of CDI, which brought into question its usefulness even for a first, non-severe CDI. We aimed to explore adherence of the initial CDI therapy to the current ESCMID treatment guidelines and to compare treatment outcomes of the first non-severe CDI episode between oral metronidazole and vancomycin group.

**Materials/methods:** This retrospective observational study included in-patients of all ages with laboratory confirmed CDI, treated at the University Hospital for Infectious Diseases, Zagreb, Croatia, from 2013 to 2017. Statistical analysis was performed.

**Results:** Among 1073 hospitalizations due to CDI the mean age of the patients was 71.4±17.4 years, females predominated (58.2%), 77.2% were ≥65 years old and 76.9% had a healthcare-associated CDI. Adherence to the ESCMID treatment guidelines was found in 705 (65.7%) patients, and adherence insignificantly increased with CDI episode number. The adherence differed significantly (p<.001) within each number-of-episode group according to disease severity, with the lowest adherence among fulminant CDIs (21.6% for the first, 15.4% for the second and 25.0% for the ≥ third episode). The in-hospital mortality rate was highest during the first CDI episode (p<.001). Groups treated initially with oral metronidazole (N=282) and oral vancomycin (N=78) for the first, non-severe CDI episode were comparable by clinical and epidemiological features (p>0.05), and no differences in the in-hospital mortality rates and need for intensive care unit admission due to CDI were found. However, the initial treatment with oral metronidazole had to be changed to another therapy in 64/282 (22.7%) patients, mostly (33/64 patients) due to clinical inefficiency and in 22/64 due to side effects, in comparison to only 2/78 (2.6%) who switched therapy in the vancomycin group.

**Conclusions:** The low adherence to the treatment guidelines, especially for the most lethal first disease episode and fulminant CDI, warrants additional education of the clinicians, and its clinical impact should be further investigated. The high rate of clinical inefficiency and unwanted side effects of oral metronidazole therapy make its usefulness doubtful, even for a first, non-severe CDI.