1631. The Impact of Obesity of *Clostidium difficile* Recurrence

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Background. *Clostridium difficile* infections (CDIs) related discharge diagnoses have doubled from approximately 139,000 to 336,600 during this decade. Recent studies suggest that obesity may increase the risk of CDI acquisition due to dysbiosis of commensal gut flora seen in obese patients. No prior studies have examined whether obesity impacts the rate of CDI recurrence.

Methods. We conducted a retrospective review of patients with laboratory confirmed CDI at the VA Boston Healthcare System between March 1, 2010 and February 28, 2013. Identified cases were patients who were treated for the first episode of CDI. A chart review was conducted to gather baseline characteristics such as body mass index (BMI), comorbidities (Charlson Index), age, use of proton pump inhibitors or H2-blockers, and initial treatment antibiotics. Patients with Charlson Index score of >3 were considered high risk. Each of the cases were followed forward for 6 months after initial diagnosis to identify recurrence (positive CD diagnostics within 60 days following complete resolution of first episode.) Patients who died within 60 days of primary CDI and those who received fidaxomicin as first line therapy were excluded. Univariate analysis as well as logistic regression was performed evaluating known risk factors for recurrence and obesity (defined as BMI $\geq$ 30).

Results. Among 257 patients meeting inclusion criteria, 41 (16%) developed a recurrent CDI. Thirty-one/184 (16.8%) patients with normal BMI had a recurrence, compared to 10/73 (13.7%) of obese patients ($p = 0.53$). In a logistic regression adjusting for known risk factors, age was found to be the only variable predicting recurrence ($p = 0.09$).

Conclusion. Our data suggests that obesity was not associated with an increased risk of CDI recurrence within the first 6 months after initial CDI diagnosis. The influence of other covariables in this high-risk nosocomial population may outweigh that of obesity and it would be interesting to explore this analysis in low risk, community dwelling patients with CDI. Like prior studies, we found age to be a strong predictor of recurrence in this population.