C0496: Hospital Admission Time and Paracentesis Administration Among Patients With Cirrhosis.

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INTRODUCTION

Decompensated cirrhosis, as evidenced by ascites, variceal bleed, hepatic encephalopathy and hepatocellular carcinoma, is a common presentation in patients requiring inpatient care. According to the 2012 guidelines from the American Association for the Study of Liver Disease, paracentesis should be performed in patients admitted to the hospital with ascites regardless of the reason for admission. The benefits of early paracentesis almost always outweigh the possible risks of infection or bleeding associated with paracentesis. Performing paracentesis has a greater diagnostic yield if done prior to antibiotic administration as even a 6 hour delay can result in decreased infection detection rate.

This retrospective study hypothesizes that evening admission will be positively associated with delay in paracentesis (defined as 12-hour paracentesis delay) and non-optimal treatment choice of paracentesis being done after antibiotic administration.

METHODOLOGY

138 patients admitted with ascites secondary to cirrhosis between March 2017 and February 2021 were included. Variables studied included hospital admission of day (7 AM to 6:59 PM) versus evening (7 PM to 6:59 AM), paracentesis delay (Y/N), whether paracentesis was performed before antibiotic administration, after antibiotic administration, or not performed. IBM SPSS Statistics Version 28 and Stata SE Version 17 were used for the analyses. P-values were two tailed with alpha level for significance at $p<0.05$.

RESULTS

We found that of all patients, 39% had paracentesis after antibiotic administration, 43% did not have paracentesis at all and 37% had delayed paracentesis. During evening admission, fewer patients were likely to have paracentesis before antibiotic administration ($p=0.096$). In analyses comparing paracentesis after antibiotic administration with paracenteses before antibiotic administration, evening admission was significantly associated with increased relative risk for paracentesis after antibiotic administration (p 0.046). Also, when combining the groups of paracenteses after antibiotic administration with paracentesis not done, evening admission was associated with lowest frequency of paracentesis before antibiotic administration ($p=0.03$).

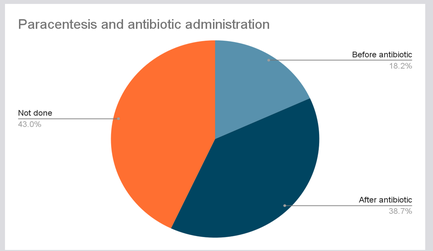

Figure 1: Percent paracentesis in relation to antibiotic administration

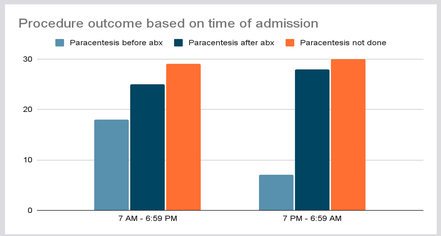

Figure 2: Paracentesis outcome based on time of admission

CONCLUSION

The benefits of early paracentesis outweigh the risks of infection or bleeding associated with the procedure. Performing paracentesis has a greater diagnostic yield if done prior to antibiotic administration, as even a 6-hour delay can decrease infection detection rate. We found that overall, fewer patients with ascites received paracentesis and evening admission was associated with suboptimal management with paracentesis done after antibiotic administration. Based on above findings, there is room for improvement in educating all clinicians, particularly those working during the evening shift, of the importance of performing paracentesis prior to antibiotic administration.

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