Title: The Impact of Chronic Liver Disease on Short-Term In-Hospital Outcomes in Patients Undergoing a Total Hip Arthroplasty

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Background: There is sparse literature regarding the in-hospital outcomes for patients diagnosed with a chronic liver disease (CLD) who undergo a total hip arthroplasty (THA). Any dysfunction of the liver is a risk for a patient undergoing surgery since the liver is involved in processing medications and with the clotting cascade. This study aims to elucidate the correlation between in-hospital outcomes for patients undergoing THA with CLD.

Methods: This retrospective cohort study utilized the Nationwide Inpatient Sample (NIS) to identify patients from 2012-2015 who had undergone a THA as coded for by ICD-9. ICD-9 codes were then used to identify those patients with any form of CLD. Data analyses assessed the length of stay (LOS), total hospital charges, age of admission, and mortality. Patients missing data for any of these variables or under the age of 18 at admission were excluded.

Results: We identified a total of 256,377 patients from the sample years who underwent a THA. Of those patient encounters, 1312 also carried a diagnosis of CLD. Those with a CLD had statistically significant increases in mortality (1.12% vs 0.52%, p =.001), LOS (4.25 days vs 3.37 days, p <.0005), total charges ($62,355.37 vs $54,358.83, p <.0005), and age of admission (59.24 years vs 61.87 years, p<.0005) as compared to the control group of patients who underwent THA without a diagnosis of CLD.

Conclusions: This study is one of the first to assess short-term in-hospital outcomes for patients with the diagnosis of CLD who underwent a THA. Due to these results, physicians should cautiously monitor liver function before, during, and after the procedure and possibly wait to perform the procedure until treatment. They will also want to replenish vitamin K and give infusions of fresh frozen plasma to correct the prothrombin time and monitor the patient closely postoperatively.

Conflicts of Interest: The authors declare no conflicts of interest.