INPLASY

Risk of Bleeding in Abdominal Paracentesis For patients with Chronic Liver Disease and Coagulopathy: A systematic review

INPLASY202390062

doi: 10.37766/inplasy2023.9.0062

Received: 19 September 2023

Published: 19 September 2023

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ADMINISTRATIVE INFORMATION

Support - NA.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202390062

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 September 2023 and was last updated on 19 September 2023.

INTRODUCTION

Review question / Objective This review paper aims to clarify the current evidence regarding the risk of bleeding during abdominal paracentesis in patients with coagulopathy, especially those with chronic liver disease. Additionally, it seeks to investigate strategies for mitigating this risk.

Background Abdominal paracentesis is a commonly performed procedure to obtain ascitic fluid from the peritoneal cavity either for diagnostic purposes or to provide therapeutic removal of excess ascitic fluid accumulated as a result of pathological diseases such as chronic liver disease, malignancy, or heart failure. However, the potential risk of bleeding associated with the procedure is a major concern. Patients with chronic liver disease, in particular, are at risk of developing both ascites and coagulopathy, further increasing the risk of severe bleeding.

Although conventional blood tests such as the International Normalised Ratio (INR) and platelet count are commonly performed before abdominal paracentesis, these investigations do not accurately reflect the true state of coagulopathy in patients with chronic liver disease or those who take direct oral anticoagulants. The optimal strategy to prevent bleeding associated with abdominal paracentesis remains unclear.

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Rationale This review paper aims to clarify the current evidence regarding the risk of bleeding during abdominal paracentesis in patients with

coagulopathy, especially those with chronic liver disease. Additionally, it seeks to investigate strategies for mitigating this risk.

METHODS

Strategy of data synthesis An electronic search was performed in only clinical databases Pubmed Medline and Ovid EMBASE from database inception to the 29th Sep 2022 using the following MeSH terms or free text: “ascites,” “paracentesis,” “ascitic drain,” “INR,” “international normalised ratio,” “coagulopathy,” “platelet” and “thrombocytopaenia”.

Eligibility criteria Studies were selected if they reported any bleeding complications of abdominal paracentesis, including the use of any investigations or management such as the measurement of platelet count, INR or thromboelastography, use of blood transfusion products, or ultrasound-guided abdominal paracentesis. To be included in the scoping review, studies had to provide sufficient details for descriptive statistics (incident cases of bleeding complications, the total number of abdominal paracentesis performed, mean INR, mean platelet count or thromboelastography parameters). We excluded studies of children (<18 years), animals, non-English publications, case reports or abstracts.

Source of evidence screening and selection The following data were extracted from each study: author, year, country, study type, participants, use of ultrasound, incident cases of bleeding, number of paracentesis performed, mean INR and mean platelet count. Two investigators (J.T and T.L) extracted the data independently, and a consensus was achieved by discussion.

Data management NA.

Reporting results / Analysis of the evidence Thematic analysis.

Language restriction English only.

Country(ies) involved Australia.

Keywords Chronic liver disease, coagulopathy, abdominal paracentesis, ascitic drain, bleeding.

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