TITLE: Paracentesis for the Removal of Peritoneal Fluid: Guidelines

DATE: 29 January 2014

RESEARCH QUESTIONS

1. What are the evidence-based guidelines regarding the amount of fluid that can safely be drained by paracentesis?

2. What are the evidence-based guidelines regarding the maintenance of indwelling paracentesis catheters?

KEY MESSAGE

One systematic review and two evidence-based guidelines were identified regarding the amount of fluid that can safely be drained or the maintenance of indwelling catheters in adult patients undergoing paracentesis.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2014, Issue 1), University of York Centre for Reviews and Dissemination (CRD) databases, ECRI (Health Devices Gold), Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2009 and January 13, 2014. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.
RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by evidence-based guidelines.

One systematic review and one evidence-based guideline were found regarding the maintenance of indwelling catheters in adults undergoing paracentesis. One evidence-based guideline was found regarding the risk of post-paracentesis circulatory dysfunction and which plasma expanders should be considered to prevent it at specific volumes of fluid removed.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

One systematic review\(^1\) was identified regarding the management of drains for the treatment of malignant ascites in women with gynaecological cancer, however the authors were unable to identify any relevant studies, and thus no results were presented. The evidence-based guideline\(^2\) by the Joint Society of Obstetricians and Gynaecologists of Canada-Canadian Fertility and Andrology Society Clinical Practice Guidelines Committee on the diagnosis and management of ovarian hyperstimulation syndrome recommends that when performing paracentesis to relieve tense ascites, an indwelling pig-tail catheter should be inserted under ultrasound guidance to limit potential infectious complications and should be removed when ascites output is less than 50 mL per day.

While no evidence-based guidelines were identified regarding fluid volume limits and overall safety during paracentesis, the European Association for the Study of the Liver 2010 guidelines\(^3\) recommend that large volume paracentesis (LVP) be performed in a single session for cirrhosis patients with large ascites and that albumin be administered to patients undergoing LVP of more than 5 L; this is more effective than other plasma expanders in preventing post-paracentesis circulatory dysfunction. The guideline also suggests the use of albumin in patients who have less than 5 L of fluid removed, despite the lower risk of post-paracentesis circulatory dysfunction.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses

Evidence-Based Guidelines and Recommendations
   See “Paracentesis”, page 1160.

   See Section 1.4.3: Grade 3 or Large Ascites, and Section 2.2.1: Management of Refractory Ascites: Large Volume Paracentesis.

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APPENDIX – FURTHER INFORMATION:

Clinical Practice Guidelines – Methodologies Uncertain or Alternate Areas of Potential Interest


Systematic Reviews and Meta-Analyses – Albumin Infusion


Review Article