TITLE:  Post-Operative Cerebrospinal Fluid Removal: Guidelines

DATE:  10 December 2014

RESEARCH QUESTIONS

1. What are the evidence-based guidelines regarding removal of lumbar cerebrospinal fluid (CSF) for post-operative patients who have undergone thoracoabdominal aortic (TAAA) surgery or thoracic endovascular aneurysm repair (TEVAR)?

2. What are the evidence-based guidelines regarding maintenance and care of lumbar drainage sites while lumbar drains are in situ and after drain removal?

KEY FINDINGS

Two systematic reviews and two evidence-based guidelines were identified regarding the removal of lumbar CSF for post-operative patients who have undergone TAAA surgery or TEVAR.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2014, Issue 12), 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. No methodological filters were applied to limit retrieval by publication type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and December 1, 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.
SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

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<th>Table 1: Selection Criteria</th>
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<td><strong>Population</strong></td>
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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.

Two systematic reviews and two evidence-based guidelines were identified regarding the removal of lumbar CSF for post-operative patients who have undergone TAAA surgery or TEVAR. No relevant health technology assessment reports were found. In addition, no evidence-based guidelines regarding maintenance and care of lumbar drainage sites while lumbar drains are in situ and after drain removal were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

Two systematic reviews and two evidence-based guidelines were identified regarding the removal of lumbar CSF for post-operative patients who have undergone TAAA surgery or TEVAR.

Overall there is very limited evidence that removal of lumbar CSF is indicated and beneficial for patients undergoing TAAA surgery or TEVAR.

One systematic review and meta-analysis\(^1\) reported that CSF drainage in patients undergoing type I or type II TAAA surgery resulted in a reduced risk of post-operative deficits, based on the pooled results of three small trials. Another systematic review and meta-analysis\(^2\) reported similar incidence rates of spinal cord ischemia (SCI) following prophylactic drain placement or no prophylactic drain placement in individuals undergoing TEVAR, based on pooled results from 46 studies.

One evidence-based guideline\(^3\) reported that the placement of a lumbar drainage device for the improvement of spinal cord perfusion is indicated for patients with thoracoabdominal aortic aneurysms. Another evidence-based guideline\(^4\) recommended CSF drainage as a spinal cord protective strategy in open and endovascular thoracic aortic repair for patients at high risk of
SCI. This was a class I (i.e., procedure or treatment should be performed or administered as benefit greatly outweighs risk) based on limited evidence evaluating limited populations.

No evidence-based guidelines regarding maintenance and care of lumbar drainage sites while lumbar drains are in situ and after drain removal were identified; therefore, no summary can be provided.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses


Guidelines and Recommendations


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APPENDIX – FURTHER INFORMATION:

Review Articles