



TITLE: Tunnelled Catheters for the Management of Pleural Effusion: Clinical Effectiveness

DATE: 04 November 2016

RESEARCH QUESTION

What is the comparative clinical effectiveness of tunnelled catheters in managing refractory malignant, or malignancy related, pleural effusion in palliative patients?

KEY FINDINGS

No relevant literature was identified regarding the comparative clinical effectiveness of tunnelled catheters in managing refractory malignant, or malignancy related, pleural effusion in palliative patients.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, ECRI Institute (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, 2011 and October 24, 2016. Internet links were provided, where available.

SELECTION CRITERIA

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

Table 1: Selection Criteria

Population	Palliative patients with pleural effusion
Intervention	Tunnelled catheters (i.e., PleurX, ASEPT)
Comparator	Other tunnelled catheters (i.e., PleurX, ASEPT)
Outcomes	Clinical effectiveness, clinical benefit, safety

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Table 1: Selection Criteria

Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies
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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 randomized controlled trials and non-randomized studies.

No relevant health technology reports, systematic reviews, meta-analyses, randomized controlled trials or non-randomized studies were identified regarding the comparative clinical effectiveness of tunnelled catheters in managing refractory malignant, or malignancy related, pleural effusion in palliative patients.

References of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

No relevant literature was found regarding the comparative clinical effectiveness of tunnelled catheters in managing refractory malignant, or malignancy related, pleural effusion in palliative patients, therefore no summary can be provided.

REFERENCES SUMMARIZED

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

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APPENDIX – FURTHER INFORMATION:

Previous CADTH Reports

1. Indwelling non-tunnelled versus tunnelled catheters for the management of malignant ascites: clinical effectiveness and guidelines [Internet]. Ottawa (ON): CADTH; 2016 Sep 2. [cited 2016 Nov 3]. Available from: <https://www.cadth.ca/sites/default/files/pdf/htis/2016/RB1018%20Tunnelled%20vs%20Non-Tunnelled%20Catheters%20Final.pdf>
2. Catheters for the management of malignant ascites: clinical and cost effectiveness and guidelines [Internet]. Ottawa (ON): CADTH; 2011 Mar 16. [cited 2016 Nov 3]. Available from: https://www.cadth.ca/sites/default/files/pdf/htis/march-2011/J0513_Catheter_Management_of_Ascites_final.pdf

Systematic Reviews and Meta-analyses – Alternate Comparator

3. Clive AO, Jones HE, Bhatnagar R, Preston NJ, Maskell N. Interventions for the management of malignant pleural effusions: a network meta-analysis. Cochrane Database Syst Rev. 2016 May 8;(5):CD010529.
[PubMed: PM27155783](#)
4. Kheir F, Shawwa K, Alokla K, Omballi M, Alraiyes AH. Tunneled pleural catheter for the treatment of malignant pleural effusion: a systematic review and meta-analysis. Am J Ther. 2015 Feb 2.
[PubMed: PM25654292](#)
5. Van Meter ME, McKee KY, Kohlwes RJ. Efficacy and safety of tunneled pleural catheters in adults with malignant pleural effusions: a systematic review. J Gen Intern Med [Internet]. 2011 Jan [cited 2016 Nov 3];26(1):70-6. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3024099>
[PubMed: PM20697963](#)

Non-Randomized Studies – Non-Comparative

6. Adams J, Auger J, Schiff D. Outcome of indwelling tunneled PleurX(R) catheter placement in pediatric and young adult patients with malignant effusions. Pediatr Blood Cancer. 2014 Jun;61(6):1118-20.
[PubMed: PM24474328](#)
7. den Hollander BS, Connolly BL, Sung L, Rapoport A, Zwaan CM, Grant RM, et al. Successful use of indwelling tunneled catheters for the management of effusions in children with advanced cancer. Pediatr Blood Cancer. 2014 Jun;61(6):1007-12.
[PubMed: PM24376007](#)

Review Articles

8. Chalhoub M, Ali Z, Sasso L, Castellano M. Experience with indwelling pleural catheters in the treatment of recurrent pleural effusions. *Ther Adv Respir Dis*. 2016 Sep 21. [PubMed: PM27655919](#)
9. Harris K, Chalhoub M. The use of a PleurX catheter in the management of recurrent benign pleural effusion: a concise review. *Heart Lung Circ*. 2012 Nov;21(11):661-5. [PubMed: PM22898594](#)

Alternate Comparators

10. Grannis FW, Kim JY, Lai L. Fluid complications: malignant pleural effusion [Internet]. [place unknown]: Cancer Network; 2015 Nov 1. [cited 2016 Nov 3]. Available from: <http://www.cancernetwork.com/cancer-management/fluid-complications>
See: Catheter drainage.
11. Boshuizen RC, Thomas R, Lee YCG. Advantages of indwelling pleural catheters for management of malignant pleural effusions. *Curr Respir Care Rep* [Internet]. 2013 Jun [cited 2016 Nov 3];2(2):93-9. Available from: <http://link.springer.com/article/10.1007/s13665-013-0042-4>

Additional References

Technology Briefs – Alternate Comparators

12. Jacobsen JH. PleurX® catheter system for the treatment of malignant pleural effusion: technology brief update [Internet]. Brisbane (AU): Queensland Department of Health; 2015 Jul. [cited 2016 Nov 3]. Available from: <https://www.health.qld.gov.au/healthpact/docs/briefs/WP038-update.pdf>

See also: Lambert R, Gurgacz S. PleurX® catheter system for the treatment of malignant pleural effusion: technology brief [Internet]. Brisbane (AU): Queensland Department of Health; 2012 Aug. [cited 2016 Nov 3]. Available from: <https://www.health.qld.gov.au/healthpact/docs/briefs/WP038.pdf>