

Title	Indwelling Pleural Catheter (IPC)
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Reference	Technology Review Report 010/2018, online: http://www.moh.gov.my/index.php/database_stores/store_view_page/30/325

Aim

To compare the effectiveness, safety, cost-effectiveness, and organizational issues of IPC with pleurodesis in the treatment of patients with malignant pleural effusion (MPE)

Conclusions and results

Substantial fair level of retrievable evidence to suggest that symptomatic improvement in dyspnoea, chest pain, and quality of life (QoL) were comparable between IPC and pleurodesis. Spontaneous rates between 30% and 51% occurred in a subset of patients allowing secondary catheter removal and may contribute to symptom relief. Late recurrences or failure was found to be significantly fewer in patient treated with IPC as compared to pleurodesis.

No significant differences in mortality and survival time for both treatments. Complications resulting directly from IPC insertion (dislocated/obstructed/blockage of the catheter) and pleurodesis (subcutaneous emphysema, local infection, fever, severe pain) were rarely reported. No significant differences between both treatments for serious adverse events. Chemotherapy did not increase the risk of infection while IPC is in place. The IPC was approved by the US FDA in 1997.

Patients with IPC spent significantly fewer days in hospital compared to patients undergoing pleurodesis (median 0-10 days versus 4-18 days) since IPC insertion can be done as an outpatient.

Indwelling pleural catheter was cost-effective when compared with pleurodesis with the estimated incremental cost-effectiveness ratio (ICER) of USD 10,870 per QALY gained. Sensitivity analysis indicated that IPC may be more cost-effective when patient's prognosis was 14 weeks or less (ICER: -USD 79,303 per QALY gained).

Recommendations (if any)

Indwelling pleural catheter may be used as an alternative to pleurodesis for the treatment of MPE especially in the patients with limited survival (< 14 weeks).

Methods

Electronic databases were searched through the Ovid interface: Ovid MEDLINE® In-process and other Non-indexed citations and Ovid MEDLINE® 1946 to Dec 31, 2018,

EBM Reviews - Cochrane Central Register of Controlled Trials - Nov 2018, EBM Reviews - Cochrane Database of Systematic Reviews - 2005 to Dec 28 2018, EBM Reviews - Health Technology Assessment – 4th Quarter 2016, EBM Reviews - Database of Abstracts of Reviews of Effects – 1st Quarter 2016, EBM Reviews – NHS Economic Evaluation Database 1st Quarter 2016. Searches were also run in PubMed. Google was used to search for additional web-based materials and information. No limits were applied. Additional articles were identified from reviewing the references of retrieved articles. Last search was conducted on 2nd January 2019.year.

Further research/reviews required

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