



Tunneling Through Recurrent Effusions: Indwelling Pleural Catheter's Safety and Utility in Lung Transplant Recipients

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The clinical question

Can indwelling pleural catheters (IPCs) be used safely in lung transplant recipients and what are the rates of complication in these immunosuppressed patients?

AABIP take home message

Data suggests infectious complication rates of IPC in lung transplant recipients are comparable to patients with cirrhosis, hematologic malignancy, solid tumors undergoing chemotherapy, and other solid organ transplant recipients. One should not preclude lung transplant recipients from IPC therapy on the basis of potential infection risk alone. The rate of auto pleurodesis appears to be high.

Background

There was paucity of data regarding the outcomes of lung transplant recipients with IPCs. Given different and challenging post-transplant physiology, data from non-lung solid organ transplant recipients may not be able to be generalized to lung transplant recipients. There is apprehension for the usage of IPC in immunosuppressed lung transplant recipients especially in the immediate post operative period due to concern of infectious risk. This multicentered retrospective study aimed to evaluate utility and safety of IPC in lung transplant recipients.

Study Design

Study design: Retrospective Cohort Study

Primary outcome: Incidence of infectious complications

Secondary Outcome(s): non-infectious complications, reasons for IPC removal.

Intervention(s): IPC placement

Population

Inclusion criteria

- > 18 age, Lung Transplant Recipients with non-malignant pleural effusion, Recurrent Effusion (> 1 thoracentesis)

Exclusion criteria

- N/A.

Baseline Characteristics

- N 71 IPC in 61 patients, Median Age 63. 56% of whom had confirmed lung expansion post thoracentesis prior to insertion of IPC. 59% of effusions were confirmed exudative effusions. 82% of IPC were PleurX Catheters (Brand).

Outcomes

Primary outcomes/Adverse events:

- Infectious complication rate is 7 %.

Secondary outcomes:

- Lower pleural fluid to serum total protein ratio were more likely to have a complication ($p < 0.1$)
- 11% total complication rate including infection-related (all of which led to hospitalization)
- 85% auto-pleurodesis rate.
- No significant differences in catheter type, side placement, pleural space physiology between those with and without complication.
- None of the patient that developed infectious complications were on antibiotic prophylaxis

Commentary

Largest review of IPC catheter usage in lung transplant recipient cohort to date with multiple centered involved in U.S. Limitation includes retrospective cohort study nature, lack of comparison to non-IPC management of effusions/control, lack of standardization in IPC placement techniques or antibiotic prophylaxis, potential lack of generalizability given highly specialized tertiary center setting, quality of life and clinical impact was no assessed.

Funding

Not Stated/Not applicable

Suggested Reading

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Article citation

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