**E-Table 1: Evidence table for selected manuscripts.**

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| Study | PICO QuestionsAddressed | StudyDesign | SampleSize | ParticipantsDescription | Intervention | Comparator | Outcomes | QualityAppraisal |
| Wahidi 2017 | 1A, 1B, 1C | randomized controlled trials (RCT) | 149 | Recurrent MPE patients with symptomatic benefit after prior thoracentesis procedure(s) and underwent placement of an IPC. | Daily drainage of IPC | Every other day drainage of IPC | - Primary outcome incidence of autopleurodesis.- Secondary outcomes included time to autopleurodesis, quality of life evaluations, and rate of adverse events. | High Risk |
| Muruganandan 2018 | 1A, 1B, 1C1F, 1G, 1H | randomized controlled trials (RCT) | 87 | Patients > 18 years of age with MPE with an expected survival of greater than 3 months without significant loculations. | Aggressive drainage of IPC defined as daily drainage for the first 60 days after placement. | Symptom-guided IPC drainage ( i.e. breathlessness, cough or chest tightness) maximum drainage interval q 14 days to confirm patency and assess fluid production. | - Primary outcome was mean daily breathlessness score in first 60 days using the 100mm visual analogue score (VAS).- Secondary outcomes were rates of spontaneous pleurodesis, self-reported global QoL measurements (EQ-5D-5L and 100mm VAS at randomization after maximal drainage, week 2 and 4 after randomization and monthly for 6 months), total number of episodes and duration of hospital stay for any cause, frequency of adverse events, serious adverse events, survival. | High Risk |
| Vial 2016 | 2A | Single center retrospective cohort. | 97 | Patients >18 y/o with non-draining IPC or a sudden decrease in IPC drainage with residual pleural effusion (>20% of hemithorax) confirmed by chest x-ray and/or ultrasound. Preexisting empyema patients excluded. | - IPC flushed with 20 mL sterile saline.-If < 150 mL return, 4 mg of TPA instilled into IPC.- If < 150 mL return, additional 4 mg of TPA instilled into TPC.- At any point if > 150 mL of pleural fluid obtained patient returned to regular drainage plan. | None | - Response frequency at every level of algorithm.- Frequency of re-occlusion following successful intervention.- Effect of intervention on patient symptoms.- Patient outcomes (catheter still functioning at the time of study, elective catheter removal, death with catheter in situ).- Frequency of need for repeat intervention.- Changes in X-ray following intervention.- Frequency of complications. | High Risk |
| Hak 2016 | 3I | Retrospective, case-control series  | 104 | Patients who underwent insertion of an IPC for symptomatic recurrent MPE. | Patients with IPC and concurrent chemotherapy | Patients with IPC not receiving concurrent chemotherapy | - Primary outcome development of pleural infection.- Secondary outcomes included other adverse events and six-month mortality. | High Risk |
| Mitchell 2018 | 3I | Retrospective, case-control series  | 207 patients126 IPCs | Patients with breast cancer, MPE and IPC. | concurrent chemotherapy (with in-situ IPC). | No concurrent chemotherapy | - Primary outcome was time to IPC removal.- Secondary outcome was time from IPC insertion to death. | High Risk |
| Mekhaiel 2013 | 3I | Retrospective, case-control series  | 243 patients262 IPCs | Patients with MPE + IPC (Cancer breakdown was Lung 41%; breast 16%; lymphoma 7%; Ovarian 7%). | concurrent chemotherapy (with in-situ IPC) or chemotherapy within 6 weeks of IPC insertion. | No concurrent chemotherapy (with in-situ IPC) or chemotherapy within 6 weeks of IPC insertion. | - Primary outcome was overall incidence of IPC related infection | High Risk |
| Fysh 2013 | 3G, 3H | Multicenter retrospective cohort. | 50 | Patients with histologically proven MPE and pleural infections (positive microscopic examination, positive pleural fluid culture, or purulent pleural fluid) with clinical evidence of pleural infection requiring antibiotics. | Data abstraction of patients with pleural infection. | None | - Pre-infection patient characteristics.- Microbiological characteristics of infection.- IPC Infection frequency- Time to IPC infection- Malignant effusion diagnosis. - Frequency of infection control- Outcome of infection- treatment characteristics.- Frequency of pleurodesis following infection. | High Risk |

MPE= Malignant pleural effusion

IPC= Indwelling pleural catheter