

Thoracoscopic evaluation of the effect of tumour burden on the outcome of pleurodesis in malignant pleural effusion

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Abstract

Background: It has been postulated that when the intrapleural tumour burden is high, the resultant obliteration of normal mesothelial cell surface of the pleura results in reduction in pleurodesis success rate.

Aims: to assess the hypothesis that tumour burden is associated with higher pleurodesis failure, and that tumour type can affect pleurodesis outcomes

Methods: Review of recorded video footage of local anaesthetic thoracoscopy (LAT) procedures of 45 patients with proven MPE was conducted by 2 independent assessors blinded to the patient medical records. Abnormalities were assessed according to the presence or absence of; nodules, lymphangitis, inflammation, and adhesions on each of the parietal, visceral and diaphragmatic surfaces. A macroscopic score was developed by adding the number of abnormalities in each pleural surface to produce a total score for tumour burden which was correlated with tumour type and pleurodesis outcome

Results: In both mesothelioma (n=21) and non-mesothelioma (n=24), there were no significant differences between the tumour burden score and the outcome of pleurodesis (p=0.188 and 0.173 respectively). The rate of pleurodesis success was higher in the non-mesothelioma group (n=16; 66.7%) compared to the mesothelioma group (n= 9; 42.9%) with no significant difference between both groups (p=0.11)

Conclusion: We found no relationship between tumor burden and pleurodesis outcome. Further prospective evaluation in a larger cohort is underway. Consistent with the reported literature, we found that mesothelioma has a high failure rate of pleurodesis compared to non-mesothelioma patients