

Robot-Assisted Thoracoscopic Lung Decortication

Navid Ajabshir, MD

KEYWORDS

Decortication, VATS, Empyema, Fibrothorax

SYNOPSIS

Several studies have demonstrated comparable, if not improved, outcomes when performed using a minimally-invasive, thoracoscopic approach compared to open thoracotomy for total lung decortication. The robotic platform may allow for improved dexterity within the bony thorax. Here, we compare decortication when using the robot compared to a traditional VATS approach.

PURPOSE

METHODS

This is a nonrandomized, retrospective cohort study of 50 consecutive patients who underwent minimally-invasive decortication procedures performed in a single-institution, tertiary care community hospital over a two year period. Perioperative and postoperative factors were assessed including operative time, estimated blood loss, conversion to open thoracotomy, length of stay, and 30-day mortality.

RESULTS

The cohort consisted of 29 patients who underwent VATS decortication and 21 patients who underwent RATS decortication. The intra-operative variables were not significantly different between the two cohorts. The operative time of VATS decortication was less than RATS decortication (291 minutes \pm 110 vs. 319 minutes \pm 154, $p = 0.47$). The estimated blood loss was higher in the VATS cohort (202 milliliters \pm 392 vs. 187 milliliters \pm 247, $p = 0.86$). More VATS procedures were converted to open thoracotomy than RATS procedures (21% vs. 5%, $p = 0.08$). There was no significant difference in the post-operative hospital length of stay (8 days \pm 8.1 vs. 6 days \pm 3.1, $p = 0.16$) or in the 30-day mortality between the two cohorts (17% vs. 5%, $p = 0.17$).

CONCLUSIONS

Total lung decortication via a robotic platform is safe, feasible, and comparable to the traditional VATS approach. No increase in operative time or estimated blood loss was observed between the two approaches. Increased dexterity on the robotic platform may reduce the incidence of conversion to open thoracotomy.

SPONSOR NAME

Kfir Ben-David