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THE USE OF REINFORCED SURGICAL STAPLER RELOADS IN SECONDARY SPONTANEOUS PNEUMOTHORAX

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Introduction: Secondary spontaneous pneumothorax (SSP) commonly afflicts patients with chronic obstructive pulmonary disease (COPD). Indications for surgery remain unclear as these patients often have other co-morbidities which increase risk of surgery as well as concerns of prolonged air-leak. The use of reinforced surgical stapler reloads (RSSR) is one of the methods proposed to decrease incidence of air-leak. We report outcomes following the use of RSSR in SSP patients with COPD.

Methods: All COPD patients with SSP who underwent surgical management with the use of RSSR in a single-institution from May 2015 to May 2017 were included. Demographic and clinical data were collected retrospectively.

Results: 28 patients with a mean age of 69 (51-93) years were included. All patients were male and smokers with an average smoking pack-years of 45.6 (20-100). One patient had co-existing interstitial lung disease and six had previous or current lung tuberculosis. All patients had intra-operative pleurodesis, either talc (50%), abrasion (7%) or both (43%). Median immediate air-leak measured by a digital-drainage-system post-operatively was 300ml/min (0-3300). Median duration chest tube *in-situ* was 7 (2-36) days, with 10 (35.7%) patients discharged home with chest tube *in-situ*. Fifteen (53.6%) patients had prolonged air-leak (more than five-days). Post-operative complications include 6 (21.4%) patients with pneumonia, 2 (7.1%) requiring ventilator support for more than 48-hours and 2 (7.1%) requiring reintubation. There were four 30-day mortalities; in all the cause-of-death was pneumonia. There was an additional mortality at 90-days due to pneumonia.

Conclusion: In our study, the use of RSSR does not decrease the incidence of prolonged air leak in COPD patients with SSP.

BIOGRAPHY

Esther Ern-Hwei Chan is graduated with an MA in Genetics from University of Cambridge and MBBS from Imperial College, London in 2014. She obtained her membership to the Royal College of Surgeons, England (MRCS) in 2015. She is currently working as a junior doctor in Singapore. She has published more than five papers in reputed journals and has presented posters and oral presentations at multiple conferences both locally and internationally.

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