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EARLY CHEST TUBE REMOVAL AFTER VIDEO-ASSISTED THORACIC SURGERY LOBECTOMY WITH SEROUS FLUID PRODUCTION UP TO 500 ML/DAY
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Objectives: Attempting to fast-track pulmonary resections, we removed chest tubes after video-assisted thoracic surgery (VATS) lobectomy with serous fluid production up to 500 ml/day. Subsequently we evaluated the frequency of recurrent pleural effusions requiring drainage.

Methods: Data from 622 consecutive patients undergoing VATS lobectomy from January 2009 to December 2011 were registered prospectively in an institutional database. Data included age, gender, lobe(s) resected, bleeding and operative time. Follow-up was 30 days from discharge. All complications requiring pleural drainage and all readmissions were registered. Twenty-three patients were excluded due to missing data leaving 599 for final analysis. Our primary outcome was the number of patients requiring pleural drainage due to effusion. Secondary outcomes included postoperative day (POD) of chest tube removal and POD of discharge. Proportions of patients requiring drainage due to pleural effusion were compared between three groups according to POD of chest tube removal (day 0-1, 2-3 and ≥4, respectively) using the Fisher’s exact test.

Results: Pleural effusion after chest tube removal required drainage in 17 patients (2.8%). Of these, 7 required readmission. Median time of chest tube removal was POD 2 and median time of discharge was POD 4. No statistical significant correlation were found between proportions of interventions due to pleural effusion and POD of chest tube removal (P = 0.50). Median time from chest tube removal to discharge was 1 day in all groups. Of the patients receiving drainage due to pleural effusion, none had complications to the intervention, except 1 who developed pneumothorax after pleurocentesis.

Conclusions: The proportion of patients who developed pleural effusion necessitating drainage was low (2.8%) and complications to the renewed intervention were few. Our findings indicate that chest tube removal after VATS lobectomy is safe despite volumes of serous pleural production up to 500 ml/day.

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