Reoperations are Common Following VATS for Spontaneous Pneumothorax: Study of Risk Factors.

Ingimar Ingolfsson, E Gyllstedt, R Lillo-Gil, A Pikwer, Per Jönsson, T Gudbjartsson. Lund, Sweden

Objectives: To identify risk factors for reoperation following surgery for spontaneous pneumothorax.

Material and methods: This is a retrospective clinical study conducted on 240 consecutive patients operated on for spontaneous pneumothorax in Lund University Hospital between January 1996 and December 2003. Patient information was gained from medical charts and operation reports. Logistic regression analysis was used to evaluate risk factors. Median follow-up was 54 months.

Results: Video-assisted thoracoscopic surgery (VATS) was used in 93% of the patients, where bullectomy with or without pleurodesis/pleurectomy was performed in most cases. Conversion to anterolateral thoracotomy was required in 6 cases (2.3%). Operative mortality (< 30 days) was 0.8% (0% after VATS). Altogether 35 patients (13.7%) required a reoperation. Twenty patients were reoperated on within one month from surgery, most often due to prolonged air leakage (n=13, 5.1%) and bleeding (n=6, 2.3%). Fifteen patients (5.8%) were reoperated on because of recurrent pneumothorax, on average 17 months (range 1 - 39 months) after the primary operation. Significant independent risk factors for reoperation were; young age, operations performed for secondary pneumothorax due to emphysema and recurrent pneumothorax. The risk was also increased in patients where wedge resection was not performed. However, the type of pleurodesis or pleurectomy was not related to increased risk.

Conclusions: A considerable number of patients require reoperation after VATS for pneumothorax. Most reoperations are due to prolonged air leakage or recurrent pneumothorax. The risk for reoperation is increased in younger patients, patients operated for recurrent or secondary pneumothorax, and in cases where pulmonary wedge resection is not performed.