

Complicated pneumothorax: short- and long-term results of endoscopic fibrin pleurodesis.

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Abstract:

Complicated pneumothorax is defined as a recurrent or persistent air leak in the pleural interspace beyond 5 days despite adequate tube drainage. Up to now, this disorder could only be corrected by open thoracotomy. Endoscopic fibrin pleurodesis is shown to be a method that could obviate, in most cases, the need for thoracotomy. In the last 6 years, 138 of 153 patients presenting with complicated spontaneous pneumothorax were treated with this method. The fibrin sealant consists of 2 components: fibrinogen, factor XIII, and albumin dissolved in aprotinin (3,000 KIU/ml), and a thrombin calcium chloride solution, which is applied through the working channel of a thoracoscope and vaporized with nitrous oxide. In this observation period, 6 (4.4%) recurrences were observed, which were subsequently treated with thoracotomy; a second attempt at fibrin pleurodesis was not undertaken. In all cases, endoscopic sealing was followed by prompt reexpansion of the collapsed lung. Long-term follow-up was satisfactory, pulmonary function tests showed no signs of restrictive dysfunction, and pleural fibrosis was not observed on x-ray as reported in other modes of treatment. Following these results, it is concluded that this method is useful in cases of persistent, therapy-resistant, complicated spontaneous pneumothorax; its effects are durable and it has a low rate of recurrence. It produces a physiological healing process without damage to the pleura.