

Letter to the Editor

VATS Pleurectomy - A Successful Way to Treat Pneumothorax Recurrence After Blebs Resection

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To the Editor,

Pneumothorax is defined as a collection of air that is located between the visceral and parietal pleura.

Spontaneous pneumothorax occurs in the absence of any identified trauma. It is subdivided into primary and secondary types. The annual incidence of primary spontaneous pneumothorax (PSP) in the general population is estimated to be 5 to 10 per 100000. The peak incidence occurs between 16 and 24 years of age (1,2).

We present the case of a sixteen-year-old boy who manifested on several occasions with right-sided spontaneous pneumothorax. The boy was actively involved in sports. Until spontaneous pneumothorax occurred, he had never been ill. He did not take medication. He had no allergies. A total of three times the right chest was drained. At each arrival, pneumothorax manifested with abrupt pain. The X-ray confirmed the diagnosis each time. After a third spontaneous pneumothorax, a CT of the chest was done. CT showed small apical blebs. The trachea was neatly positioned, neatly branching. The right main bronchus seemed wider than the left. The vascular structures were of a neat appearance. The heart was neatly positioned, with a morphologically neat appearance. Surgical treatment was initiated. After collapse of the right lung, an incision was made in the third intercostal space to the right in the anterior axillary line. An angle camera was installed. Upon placement of the camera, the trocar is placed in the seventh intercostal space in the median axillary line. After identifying the apical blebs changes with a linear endostapler, a resection is performed (Figure 1). A partial parietal pleurectomy is then performed (Figure 2). Negative pressure drainage is set. In prophylaxis, the boy received cefazolin. A one-year follow-up did not result in relapse.

Superficial alveoli can form subpleural blebs that rupture directly into the pleural space. These blebs are usually found in the lung apices, presumably due to the selective ventilation and higher transpulmonary pressures seen in the upper lobes (3). When pneumothorax occurs, the free passage of air into the pleural space allows equalization of intrapleural and atmospheric pressures, which predisposes to partial lung collapse. Surgery for pneumothorax consists of stapling ruptured blebs and resection of abnormal lung tissue. The approaches used include VATS (video-assisted thoracoscopic surgery), mini-thoracotomy and conventional thoracotomy. We usually use VATS, which provides adequate exposure for resection or stapling and an opportunity for pleurectomy, abrasion or chemical pleurodesis. The morbidity of VATS is less than with conventional or mini-thoracotomy, and recurrence rates are approximately 5%, although open thoracotomy and pleurectomy have the lowest recurrence rate (4). Given that in our previous cases, after repeated tube drainage, we did not have recurrences, we did not opt for VATS immediately after the first recurrence. Reading the literature, in the future we will be guided by the algorithm to initiate VATS after the first recurrence of pneumothorax. In accordance with the research of other authors, we have decided to use VATS pleurectomy since excellent results have been described in comparison with other techniques (5).

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FIG. 1. Resected apical portion of lung with blebs.



FIG. 2. Partial parietal pleurectomy.