

Intercostal Lung Hernia after Pectus Bar Removal

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A 27-year-old man presented with chest pain and shortness of breath. A chest radiograph revealed collapse of the right lung (Fig. 1); this was his third episode of ipsilateral pneumothorax during the past 3 years. He had a history of minimally invasive repair of pectus excavatum (MIRPE) at another hospital 11 years earlier, and he had undergone surgery for a bar removal 4 years earlier. The computed tomographic scan of the chest revealed deformed ribs, costal cartilages, herniation of both lungs through the chest walls (Fig. 2), and a huge bulla in the right upper lobe. During surgery, the right lung was densely adhered to the parietal pleura, and the medial segment of the right middle lobe was herniated through the chest wall (Fig. 3). We resected the bulla of the right upper lobe and the herniated portion of the right middle lobe with an endostapler after the adhered lung was dissected free due to air leakages from those lobes.

Complications related to a pectus bar such as displacement,



Fig. 1. Chest radiograph showing the right pneumothorax.

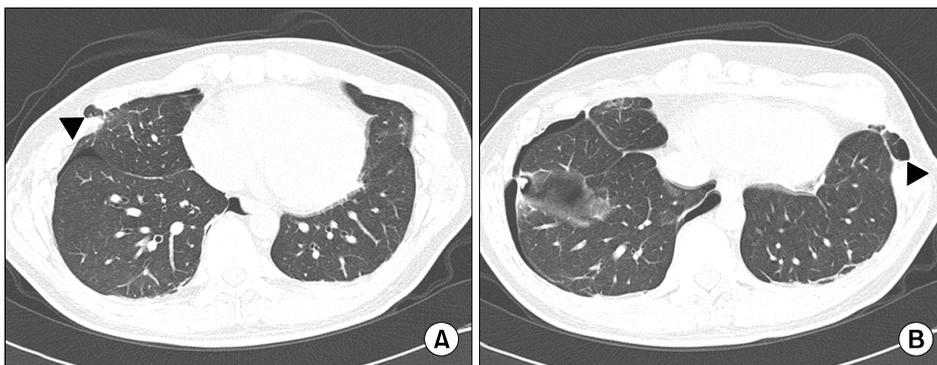


Fig. 2. Computed tomographic scan of the chest showing herniation (arrowhead) of the right middle lobe (A) and the left upper lobe (B).

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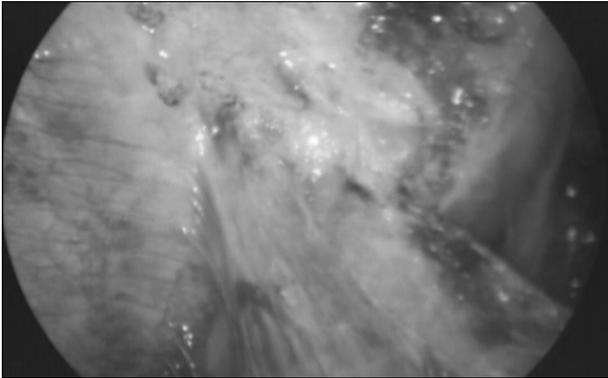


Fig. 3. Intraoperative thoracoscopic view shows the right middle lobe herniated through the intercostal space.

infection, and allergy make up most of the late postoperative complications [1]. However, intercostal lung hernia after pectus bar removal is rare, and it has not been previously re-

ported on. The patient had had a pectus bar for 7 years, and it may have caused deformities of the ribs and costal cartilages, especially at the sites where it entered and exited the pleural cavity. As a result, intercostal defects were created on each side of the chest wall, and the lungs may have herniated through these defects. Although this type of herniation usually does not cause pulmonary problems such as a reduction of lung function, they can complicate entering the pleural cavity during surgery in the future.

REFERENCE

1. Kelly RE, Goretsky MJ, Obermeyer R, et al. *Twenty-one years of experience with minimally invasive repair of pectus excavatum by the Nuss procedure in 1215 patients.* Ann Surg 2010;252:1072-81.