Lung herniation after minimally invasive atrial-septal-defect closure

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A 50-year old patient presented with chronic tussive irritation and chest pain after minimally invasive atrial septal defect (ASD) repair. In the computed tomography (CT) scan, the lung was found to have herniated (Fig. 1a and b).

The defect in the chest wall was repaired surgically (Fig. 2). Lung herniation is a rare complication observed more frequently with the advent of minimally invasive cardiothoracic surgery.

Figure 1: (a) The axial view of the CT image depicting the herniation of parts of the right lung. In addition to a right anterolateral thoracotomy in the fourth intercostal space, one port was used for the Chitwood clamp. The ASD was closed with a Dacron patch. (b) The longitudinal view.

Figure 2: The CT scan after surgical repair with a direct closure of the chest wall defect.