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Two for One: Percutaneous CT-Guided Drainage of a Lung Abscess and Parapneumonic Effusion in a Single Procedure

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This is the case of 38-year-old patient with cerebral palsy who presented with fever and dyspnea. Chest radiography revealed a left lung opacity and ipsilateral pleural effusion (PE). Despite antibiotic therapy, clinical and radiologic improvement was minimal (fig. 1A). Thoracic CT demonstrated a left lower-lobe lung abscess (LA) with a moderate PE (fig. 1B). Due to poor clinical response, sequential CT-guided drainage of both the PE and the ipsilateral LA was performed in one single session using 2 pigtail catheters (PC). The pleural PC was inserted first (fig. 1C), which allowed partial evacuation of the pleural cavity and approximation of the LA to the chest wall. After securing the pleural catheter, a 2nd PC was successfully placed into the LA (fig. 1D). Simultaneous drainage of both the PE and the LA (fig. 1E-F), along with optimal antibiotic therapy, resulted in complete recovery without complications (fig. 1G). Systemic antibiotics remain the mainstay treatment for LAs; however, up to 37% of cases fail to respond and may require drainage or other interventional procedures.¹ To our knowledge, simultaneous percutaneous CT-guided drainage of an ipsilateral lung abscess and parapneumonic pleural effusion in a single procedure has not previously been reported. This combined approach could be a safe and effective option in selected patients with LAs complicated with ipsilateral PE.

References

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Figure 1. A) Anteroposterior chest radiograph showing a left lower lobe consolidation (asterisk) and a moderate ipsilateral pleural effusion (arrows). B) Axial thoracic contrast-enhanced CT image showing a left lower lobe lung abscess (white asterisk) and a large ipsilateral pleural effusion (black asterisks). Note the thin rim of lung parenchyma surrounding the lung abscess (arrows). C) Axial thoracic unenhanced CT image showing the first pigtail catheter (white arrows) inserted within the left pleural cavity (asterisks), which allowed the approximation of the lung abscess to the chest wall. Note the left lower lobe consolidation (black arrows). D) Axial thoracic unenhanced CT image showing the insertion of the 2nd pigtail catheter (white arrows) inside the partially collapsed left lower lobe with associated lung abscess. (white asterisk). Note the left pleural effusion (black asterisks) and the left lower lobe consolidation (black arrows). E) Coronal thoracic unenhanced maximum intensity projection CT image showing both the pleural pigtail catheter (white arrow) and the intrapulmonary pigtail catheter (black arrow). Note the partially collapsed left lower lobe with associated lung abscess (white asterisk) and the partly evacuated left pleural effusion (black asterisks). F) Coronal 3D reconstruction CT image showing the 2 pigtail catheters: the pleural drainage catheter (white arrow) is less advanced than the intrapulmonary drainage catheter. (black arrow). G) Anteroposterior chest radiograph obtained 6 days after the double drainage procedure showing significant radiological improvement.

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Fig.1

