

# Explify Respiratory Case Report

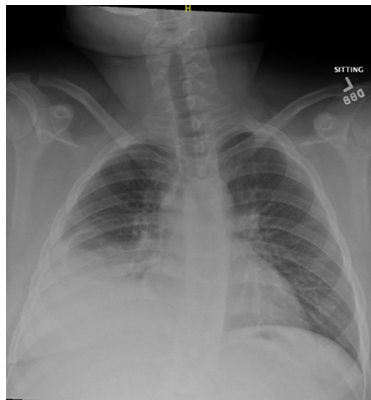
## ***Prevotella pleuriditis* Infection Diagnosed in a 12-year-old With Progressive Pleurisy and Pneumonia Complicated by Pleural Effusion**

### **In Brief**

A 12-year-old male with type II diabetes presenting with pleurisy and lung infiltrates failed to respond to multiple antibiotics as his condition worsened. Explify Respiratory identified a rare anaerobic bacterium, *Prevotella pleuriditis*, in his pleural fluid, and the patient improved on directed therapy.

### **Case Vignette**

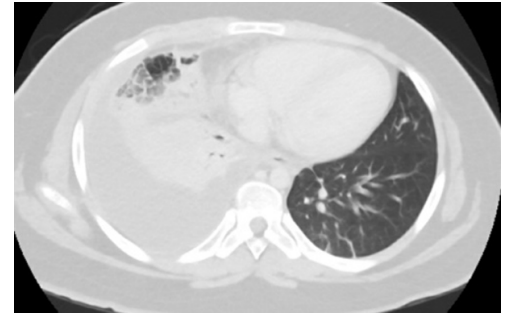
A 12-year-old male with a history of obesity, type II diabetes, and ADHD presented to his primary care provider with right-sided pleurisy. Chest X-ray revealed a right lower lobe infiltrate without obvious pleural effusion. Initial empiric therapy with cefdinir was unsuccessful, and the patient subsequently went to the ER with chest pain and shortness of breath. He was admitted overnight and given ceftriaxone and azithromycin. A multiplex PCR respiratory viral panel identified seasonal coronavirus OC43, which was not thought to explain his lobar pneumonia. Although he was febrile during admission, he had mild improvement and was discharged the following day on previously prescribed cefdinir.



[Chest X-ray at second admission](#)

Three days after the admission, the patient returned to the ER with worsening symptoms and was again admitted. Chest X-ray showed right-sided pneumonia,

now with pleural effusion, and cefdinir was empirically changed to cefepime and vancomycin.



[CT scan at second admission](#)

The following day chest CT confirmed

a large pleural effusion. Pleural fluid was obtained for aerobic and anaerobic culture, both of which remained negative. Pleural fluid was also sent to IDbyDNA for Explify<sup>®</sup> Respiratory pathogen detection. Although there appeared to be some initial improvement on the new antibiotic regimen, his condition then worsened, with increasing fluid buildup and difficulty breathing. Three days after admission thoracoscopic decortication was performed. Fluid obtained at this time was sent for aerobic and anaerobic culture but again these remained negative. With his condition worsening, his empiric antibiotic regimen was briefly changed to ceftriaxone and linezolid.

Results returning from the Explify<sup>®</sup> Respiratory analysis of pleural fluid indicated the presence of *Prevotella pleuriditis*, a rare pathogen that has only recently been recognized. Interestingly, the only previously reported case was the initial species description, where pleural empyema was also a prominent clinical feature. The current patient was placed on anaerobic coverage with meropenem and improved markedly. Ten days after his second admission he was discharged on metronidazole and continued to do well at home.