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**CASE OF THE MONTH****Jaya Buddineni, MD**

A 35 year old Hispanic male, with no significant past medical history, presented to the ER complaining of fever, cough and myalgias. The patient had gone to another ER 8 days prior to this presentation with less severe complaints and was diagnosed with a left lingular pneumonia; he was sent home on a course of Bi-axin. After initially improving, he developed left sided chest pain, productive cough, hemoptysis, fever, nausea and right upper quadrant abdominal pain. The patient lives with three healthy room-mates and denied a history of recent travel, sick contacts or exposure to animals. He works in a restaurant and reported a history of salmonella infection 3 years ago, for which he received antibiotics. He denied any history of tobacco, alcohol or illicit drug use.

On arrival, the patient was afebrile, tachycardic, and normotensive with a RR of 18/min and saturating 96% on RA. He appeared to be in mild distress and lung exam revealed diffuse, coarse rhonchi, greater on the left side. Abdominal exam revealed RUQ tenderness with normal bowel sounds and no organomegaly. The remainder of his physical exam was within normal limits.

Lab data revealed a low WBC, severe normocytic anemia and a platelet count of 43,000. He had mild hyponatremia, hypokalemia, hypochloridemia and normal renal function. Hepatic labs revealed a marked hypoalbuminemia, normal total protein, hyperbilirubinemia, elevated transaminases and a high alkaline phosphatase. A peripheral blood smear demonstrated numerous schistocytes with enlarged platelets; further workup revealed an elevated reticulocyte count, high LDH and decreased haptoglobin. A CXR showed progression of the left lingular infiltrate and an associated effusion. A hepatitis profile and legionella antigen were negative; an ultrasound of the RUQ was also WNL.

The patient was admitted to the IM service and, after appropriate cultures were obtained, he was started on IV Vancomycin, Zosyn and doxycycline. A CT of the chest demonstrated lingular and LLL consolidation, a left pleural effusion with loculations, a mild right pleural effusion and splenomegaly. CT Surgery was consulted and the patient underwent a VATS procedure for drainage and decortication; the pleural fluid was exudative, consistent with a parapneumonic effusion, but the gram stain and culture were negative; results of serologic testing for IgM and IgG are still pending. All cultures remained negative, lab abnormalities corrected, the patient's clinical status improved and he is currently undergoing pulmonary rehabilitation.

**DISCUSSION:** This is a case of partially-treated, community acquired pneumonia (CAP), presenting with severe complications of parapneumonic effusion, empyema, hemolytic anemia and pancytopenia. Common pathogens of CAP that may present with hemolysis include mycoplasma [3] and, less commonly, strep pneumonia with hemolytic-uremic syndrome. Pathogens that cause atypical pneumonia tend to produce more extra pulmonary manifestations than occurs in typical pneumonia. Atypical pneumonia can pose a diagnostic challenge for clinicians since there are no diagnostic tests for reliable and early detection of atypical organisms [2] and since partial treatment of CAP with antibiotics may mask important clinical signs. Serologic tests, including ELISA, indirect fluorescent antibody assay and particle agglutination to detect IgM and IgG, are increasingly used to diagnose atypical pneumonia. Although these tests may aid in the identification of the pathogen, delayed results and economic burden are significant barriers and they seldom help in early management decisions, including empiric antibiotic coverage. The 2007 IDSA/ATS consensus guidelines recommend diagnostic testing for a specific organism only when empiric antibiotic therapy fails to result in clinical improvement. Diagnostic testing for outpatient management of CAP is considered optional [1].

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