Liver Involvement with *Mycoplasma pneumoniae* Community-Acquired Pneumonia

I read with interest the report by Grüllich et al. reporting cholestatic hepatitis in an adult male with community-acquired pneumonia (CAP) (5). I believe there are several problems with this case.

The authors base their assumption on the temporal relationship between *Mycoplasma pneumoniae* CAP and cholestatic hepatitis. As the authors point out, this is exceedingly rare, if it occurs at all in adults. The patient described is a 35-year-old man with “high fever,” which is not characteristic of *M. pneumoniae* infection, in which fevers are usually equal to or less than 102°F. The infiltrates were described as being dense in the right lower lobe, which is also uncharacteristic of *Mycoplasma*, which usually has infiltrates that are not dense. Also disconcerting is the presence of bilateral pleural effusions in a patient with a unilateral pulmonary process, and ascites were described, which are again not characteristic of *M. pneumoniae* CAP. The authors’ diagnosis of *M. pneumoniae* was made on a serological basis. The authors further state that the diagnosis was supported by the fact that the patient initially improved after receiving clarithromycin therapy. Many features described are inconsistent with the diagnosis of *M. pneumoniae* CAP. The authors questioning the diagnosis is reasonable.

*M. pneumoniae* CAP is characterized by the absence of liver involvement, temperatures equal to or less than 102°F, the absence of relative bradycardia, and a persistent nonproductive cough that lasts for days to weeks. Extrapulmonary manifestations include nonexudative pharyngitis, meningocerephalitis, erythema multiforme, myocardial involvement, or watery diarrhea. The most common clinical presentation is that of CAP with mild nonexudative pharyngitis, dry and nonproductive cough, and watery diarrhea. The authors do not comment on diarrhea or the persistence of dry cough. They also do not describe the temperature or the relationship of the pulse to the temperature, which would be helpful diagnostically. Another critical omission is the absence of cold agglutinin titers in the case reported. Approximately 75% of patients with *M. pneumoniae* CAP have elevations of cold agglutinin titers that are often in the range equal to or greater than 1:64. This is not described in the case. The chest X-ray findings typical of *M. pneumoniae* include unilateral, patchy, but not dense infiltrates, plus or minus a small pleural effusion on the involved side. Bilateral effusions and ascites have not been ascribed to *M. pneumoniae* (2, 3, 6).

In this case, the persistence of alanine aminotransferase (ALT) elevations long after clinical resolution of the CAP is most likely due to the clarithromycin and not from an immune basis. Clarithromycin’s ability to cause cholestatic hepatitis is well known (1, 4).

In summary, the authors conclude that cholestatic hepatitis should be included in the differential diagnosis of *M. pneumoniae* CAP. I strongly disagree, as this would lead clinicians away from the correct diagnosis more often than not. The causes of CAP that commonly present with liver involvement are Legionnaires’ disease, psittacosis, and Q fever. Since no epidemiological information was included with the case, there is no reason to suspect psittacosis or Q fever in the differential diagnosis. However, Legionnaires’ disease is not uncommon, even in 35-year-old adults, and hepatic involvement with Leg-
rare and has been described only in immunocompromised patients (2). As stated, no epidemiological evidence of psittacosis or Q fever was present in the patient’s history. The patient had no exposure to animals. Furthermore, an extensive serological work-up did not demonstrate any evidence for Q fever or infection with chlamydia. Legionnaires’ disease had been excluded by a negative Legionella antigen test in the patient’s urine. Legionnaires’ disease, Q fever, or infection with chlamydia, therefore, were unlikely causes of our patient’s CAP with cholestatic hepatitis. The patient’s clinical presentation (flu-like symptoms with persistent nonproductive cough and fever without relative bradycardia) and serological profile (5) are clearly consistent with CAP due to *M. pneumoniae* infection.

Dr. Cunha suggests that the ALT elevation could be due to clarithromycin. This is extremely unlikely, since the ALT was elevated before initiation of clarithromycin therapy and decreased during treatment.

Dr. Cunha states that CAP due to *M. pneumoniae* infection is generally characterized by the absence of liver involvement. There is, however, clear evidence for liver involvement in *M. pneumoniae* infection, albeit in children (1, 2). Furthermore, recent evidence indicates that *M. pneumoniae* uses the surface-associated pyruvate dehydrogenase to bind extracellular matrix protein fibronectin highly expressed in the liver (6).

While considering Dr. Cunha’s points, we still conclude that, in view of the exclusion of Q fever, Legionnaires’ disease, and chlamydia infection, the proper diagnosis in our patient with CAP and liver involvement was *M. pneumoniae* infection. *M. pneumoniae* infection, therefore, should be considered in patients with this clinical presentation.

**REFERENCES**


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