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Hamman-Rich syndrome revisited: how to avoid misdiagnosis

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A 59-year-old man who had no underlying diseases except for obesity was referred to a private clinic with fever and sore throat. A rapid diagnostic test for influenza using the throat swab was performed and the result was negative. His symptoms did not improve, and he developed shortness of breath and inspiratory crackles in both lung fields, resulting in his transfer to a medium-sized hospital.

Figure 1. Chest X-ray and chest CT findings of patient Both chest X-ray and chest CT demonstrate ground-glass and infiltrative shadow in both lung fields.

A rapid antigen test for influenza using the throat swab was negative again, and thus, the patient was considered to have acute interstitial pneumonia based on chest radiological findings (Figure 1), and bronchoalveolar lavage (BAL) as well as transbronchial lung biopsy (TBLB) was performed (Figure 2A, demonstrating a diffuse alveolar damage compatible with acute interstitial pneumonia). Using BAL fluid, PCR for pandemic H1N1 2009 was positive. In addition, a rapid diagnostic test for influenza A was also positive using BAL fluid (Figure 2B).

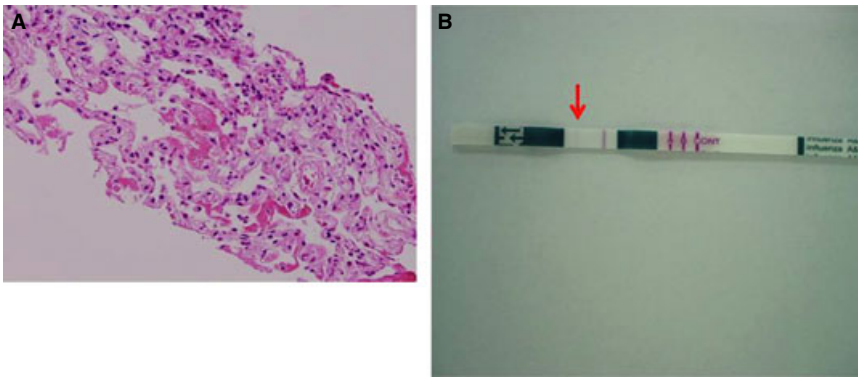

Figure 2. Transbronchial lung biopsy (A) and rapid diagnostic test for influenza A Transbronchial biopsy specimen demonstrates the formation of a hyaline membrane which is compatible with acute interstitial pneumonia. Rapid diagnostic test for influenza A was positive using bronchoalveolar lavage fluid.

Two types of commercially available kits [QuickNavi™-Flu (Denka Seiken Co., Ltd., Tokyo, Japan) and RapidTesta®-Flu Stick (Sekisui Medical Co. Ltd., Tokyo, Japan)] were used for the detection of influenza with this patient. It has been reported that the sensitivity of several rapid antigen test is not high enough for swine influenza virus detection.[1–5] Several reports have demonstrated 40–69%,[1] 51%,[2] 38·3–53·3%[3] and 44·2%[5] sensitivities. In addition, it has also been suggested that by age group, clinical sensitivity was 85·7% in patients <2 years old, 60·3% in patients between 2 and 39 years old, and 33·3% in patients aged 40 and older.[5] Therefore, clinicians should understand the obvious limitations (inadequate sensitivity) of many currently available rapid diagnostic tests for influenza viral infection.

If PCR for pandemic H1N1 2009 had not been performed, the patient would have been diagnosed with acute interstitial pneumonia: Hamman-Rich syndrome.[6]

Author contribution

JF, MT, SH, FH and MT took care of this patient. HLC significantly helped to revise this letter.

Disclosure

None of the authors has a financial relationship with a commercial entity that has an interest in the subject of this study.

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