

H1N1 Influenza Pneumonia

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CLINICAL SUMMARY

A 26-year-old male was admitted with sore throat and nasal congestion that was followed by fever, headache and shortness of breath over the next two days before his admission to the hospital. He had occasional cough with scanty clear sputum and mild chest pain under the ribs during inspiration. On examination, he was tachypneic and in respiratory distress. The temperature was 38.1°C and the pulse was 105 beats per minute, with the rest of the examination being unremarkable. There were occasional rhonchi over both the lungs.

INVESTIGATIONS

Haemogram, liver function and renal function tests were within normal limits. The initial chest radiograph (Figure 1) showed ill-defined bilateral lower-and mid-zone air-space opacities. Reverse transcriptase real time-polymerase-chain-reaction (rRT-PCR) test revealed positive result for novel influenza A (H1N1). He was treated with a course of oseltamivir phosphate and co-amoxycylav. He became afebrile but remained dyspnoeic. Seven days later, as the chest radiograph did not show any significant change in the extent of pneumonia, a chest CT was performed that showed widespread segmental and sub-segmental involvement of both the lungs (Figure 2). There were ill-defined ground-glass opacities more prominent in apical, anterior, lateral (middle lobe) and posterior basal segments of lower lobe on the right side. On the left side, the lesions were more prominent in the anterior, apico-posterior and posterior basal segments. There were patchy, peripheral, rounded, peribronchial consolidation with air bronchogram. These findings of CT were consistent with the findings of a viral pneumonia.

DIAGNOSIS

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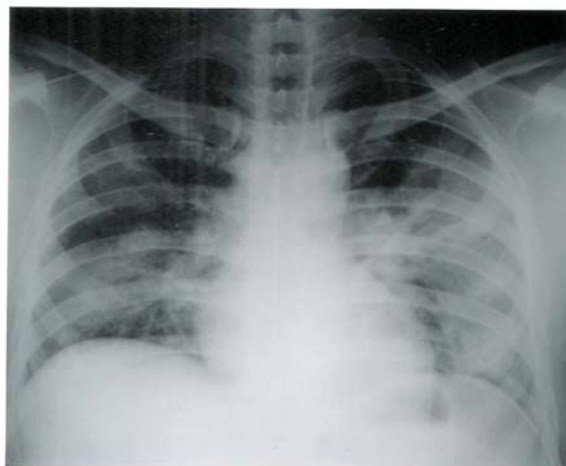


Figure 1. Chest radiograph showing ill-defined bilateral lower and midzone air-space opacities.

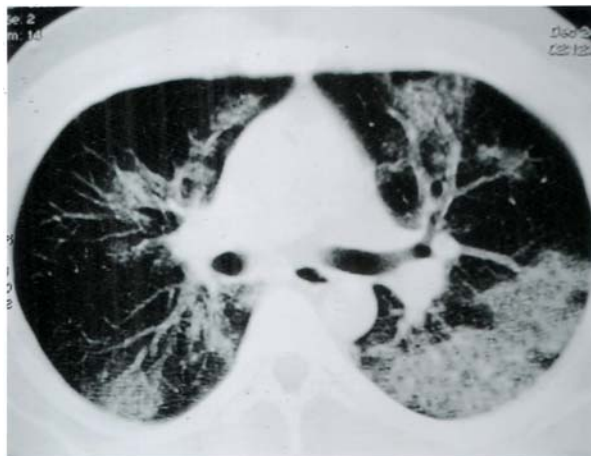


Figure 2. Lung window of CT thorax showing bilateral multi-focal patchy, rounded consolidation.

DISCUSSIONS

A new strain of influenza A (H1N1) virus is now prevalent in India and worldwide. The incubation period is estimated to range from one to seven days.

The most common clinical findings at presentation are fever, cough, dyspnoea, and respiratory distress. Most cases are mild and self-limited. It is difficult to differentiate clinically from the common seasonal flu. Few cases of H1N1 influenza do progress to severe pneumonia within days and need hospitalisation and mechanical ventilation.

Not much medical literature is available on the radiological presentations of H1N1 influenza as such cases have been reported during last few months only. The common CT findings of viral pneumonia are known as poorly-defined air-space nodules and patchy areas of peribronchial ground-glass opacities and air-space consolidations. Rapid confluence of consolidations may occur in the progressive forms of pneumonia. These findings are also common in the influenza virus pneumonia.¹

The CT findings of the case, showing the bilateral patchy areas of consolidation, similar to the typical pattern of a viral pneumonia. The ground-glass opacities and areas of consolidation had a predominant peribronchovascular and subpleural distribution and have been reported recently.² The

opacities showed air bronchograms with normal-sized bronchial airways leading into rounded ground-glass focus, whereas most of the large airways showed no significant wall thickening or mucous plugging. There was no evidence of mediastinal lymphadenopathy and pleural or pericardial effusions.

This is a typical example of a case with H1N1 pneumonia that needed hospitalisation but did not require mechanical ventilatory support. The clinician and radiologists need to be aware of the radiographic and CT findings of this viral infection so that a presumptive diagnosis and treatment of novel influenza A (H1N1) pneumonia may be considered promptly while awaiting rRT-PCR report.

REFERENCES

1. Kim EA, Lee KS, Primack SL, Yoon HK, Byun HS, Kim TS, *et al*. Viral pneumonias in adults: radiologic and pathologic findings. *Radiographics* 2002;22:S137-S149.
2. Ajlan AM, Quiney B, Nicolaou S, Müller NL. Swine-origin influenza A (H1N1) viral infection: radiographic and CT findings. *AJR Am J Roentgenol* 2009 193:1494-9.