Correspondence

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Letter to the editor: Contrasting radiological presentation of disease burden in an immunocompetent H1N1 positive patient

The Editor,

We read with great interest the article by Abbo et al [1] published recently in the *British Journal of Radiology*, which described the factors associated with increased likelihood of radiographic lung abnormalities *i.e.* dyspnoea, hypoxaemia and diabetes mellitus. They also concluded that chest X-rays may significantly underestimate lung involvement in the setting of immunosuppression. However, we would like to highlight a case in which a young H1N1 patient had radiological finding suggestive of tissue breakdown and severe lung injury but clinically presented with mild symptoms and was managed with oxygen therapy using a facemask.

A 28-year-old H1N1 positive female was admitted to the intensive care unit (ICU) with flu like symptoms and breathlessness on exertion. She had no co-morbidities but her stay in ICU was complicated by the development of a massive pleural effusion in the left lung. She had prolonged viraemia with the H1N1 virus present in nasal and oropharyngeal specimens for up to 18 days despite administration of 150 mg of oseltamivir twice daily for 10 days. Cultures from blood, bronchial secretions, urine

and pleural effusions did not reveal any bacterial or fungal pathogen.

Contrast enhanced CT of the chest showed a "head cheese" appearance in the apical and posterior segment of the right upper lobe and superior and posterior basal segment of the right lower lobe (Figure 1). Consolidation with large areas of tissue breakdown were seen in lingular segment of left upper lobe. Left pleural effusion and a minimal amount of pericardial effusion were also present.

The appearance of several types of abnormality including ground-glass opacity, consolidation, normal lung and mosaic attenuation is termed head cheese. This mixed pattern is usually indicative of a combination of infiltrative and obstructive lung disease. The most common cause of this pattern is hypersensitivity pneumonitis, sarcoidosis and infections associated with bronchiolitis. From August 2009 to July 2010 the "swine flu ICU" in our hospital admitted approximately 200 patients with suspected H1N1 infection, of these 90 tested positive. The most common presentation was acute respiratory distress syndrome secondary to viral pneumonia with consolidation involving two or more zones in either one lung or both lungs. This was the first case in which the severity of disease as assessed by the radiological picture did not correspond to the clinical presentation.

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Figure 1. Contrast enhanced CT scan of the chest shows a mixed pattern of ground-glass opacity, consolidation, normal lung and mosaic attenuation; known as "head cheese" appearance.