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Organising pneumonia as a late abnormality in influenza A (H1N1) virus infection

The Editor,

We read with great interest the well-written manuscript by Li et al [1], who reviewed serial CT findings from patients with novel swine-origin influenza A (H1N1) virus infection. They concluded that ground-glass opacities and/or consolidation observed on initial CT scans tended to resolve to fibrosis, which then resolved completely or displayed substantially reduced residual disease. In their cases, the development of probable fibrosis was noted in the first week and peaked at the third week of illness, then decreased slowly thereafter. They also suggested that the mechanism of lung fibrotic changes caused by H1N1 might have a different pathophysiological process from other diseases of the lung, and that H1N1 patients with lung fibrotic changes seem to be capable of self-rehabilitation.

The study published by Li et al [1] is very important because pulmonary fibrosis observed in the recovery phase may, at least in part, account for the respiratory symptoms observed in these patients, and limited data are available in the literature regarding CT aspects during the recovery phase after H1N1 infection [2, 3]. Although pulmonary opacities secondary to H1N1 infection usually regress during convalescence, the consolidations may occasionally progress to linear opacities (parenchymal bands) [2].

Histopathological studies have shown that, in most cases, these later changes are due to secondary organising pneumonia (OP). Gill et al [4] reviewed the autopsy records of 34 patients who died following confirmed H1N1 infection. 16 cases showed only acute diffuse alveolar damage (DAD; average time in hospital, 3.4 days), 7 showed acute and organising DAD (average time in hospital, 11.7 days) and 2 showed fibrosing and organising DAD (average time in hospital, 31.5 days) [2]. A recent study examining the correlation between CT features and pathological findings in fatal cases of H1N1 pneumonia described a patient who presented linear opacities on a follow-up CT scan performed 15 days after the first examination [3]. The patient died 28 days after the first hospitalisation, and the histological examination showed typical elongated fibroblast plugs filling airspaces, compatible with OP.

Establishing the diagnosis of secondary OP after pulmonary infection is important because proper treatment of OP requires corticosteroid therapy. Physicians should be aware that OP may complicate the recovery of patients with H1N1 infection, and the development of late opacities on CT scans during recovery should suggest this diagnosis [2, 5].

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