LETTER TO THE EDITOR

Clinical-scientific note

Late presentation of organising pneumonia in COVID-19

A 58-year-old man developed coryzal symptoms, temperature and systemic malaise and had a positive swab for COVID-19. He presented to the hospital and was hypoxic; a chest X-ray demonstrated a widespread infiltrate. He was admitted to the intensive care unit (ICU) and was commenced on dexamethasone at 6 mg daily and remdesivir with high-flow oxygen. He was initially markedly hypoxic with a nadir saturation of 81% recorded, while on 50% oxygen. His hypoxia improved in the ICU and after 4 days he was transferred to the standard ward with supplemental oxygen. After 8 days, his dexamethasone was ceased and he was discharged home.

He was subsequently reviewed 2 months after discharge and he was still complaining of significant symptoms of dyspnoea, cough and malaise. There were no other obvious features of long COVID-19. A computed tomography (CT) scan done after review demonstrated widespread ground-glass infiltrates (Fig. 1). Lung function testing demonstrated normal lung volumes with a forced expiratory volume in 1 s (FEV1) of 90% of predicted, a forced vital capacity (FVC) of 88% of predicted and a reduced lung diffusing capacity for carbon monoxide (DLCO) at 68% of predicted. The features were consistent with organising pneumonia (OP). He was treated with a moderate dose of 25 mg of prednisolone daily.

He remained on the same dose and was reviewed 2 months later. At that time, he felt that his symptoms had resolved and he had gone back to work. His lung function demonstrated a marked improvement with FEV1 of 107% predicted, FVC of 102% predicted and DLCO of 96% predicted. A repeat CT demonstrated significant improvement in the ground-glass infiltrates. He was prescribed a weaning dose of prednisolone.

A proportion of patients develop a variety of chronic symptoms beyond the initial acute illness; this has been designated as ‘long COVID-19’. Respiratory manifestations are a prominent component of this syndrome, although the number of published studies is relatively limited.1,2 OP is a relatively rare condition characterised by persistent respiratory symptoms, patchy ground-glass infiltrate on CT and specific pathological lesions, that may cause permanent lung damage if untreated. Reports have described OP occurring in patients first presenting to the hospital with COVID-193 and responding to prednisolone.4 The patient in the current report is a little different than that described in the other studies in that he received the currently recommended therapy of dexamethasone and presented 2 months after discharge. The patient did not have a pathologic confirmation of OP, although the clinical and radiological features were consistent with this condition.

There are very limited guidelines available as to how long COVID-19 should be managed. Recent guidelines from the UK-based National Institute for Health and Care Excellence

Figure 1 Chest computed tomography (CT) scan of the patient at (A) 2 months after discharge from hospital, with patchy ground-glass infiltrate (blue arrows), and (B) follow-up scan after 2 months of treatment with prednisolone 25 mg daily with less ground-glass infiltrate.
have suggested that patients with persistent respiratory symptoms should have a follow-up chest X-ray at 12 weeks. There appear to be no recommendations about the use of corticosteroids in discharged COVID-19 patients.

This case report suggests that in patients who have required ICU admission, a chest X-ray 1–2 months after discharge may identify patients with a phenotype consistent with OP. Importantly, appropriate follow-up therapy with corticosteroids may potentially benefit such patients.

Received 13 March 2021; accepted 14 April 2021.

Paul T. King
Monash Lung and Sleep, Monash University Department of Medicine, Monash Medical Centre, Melbourne, Victoria, Australia

References

1 Bellan M, Soddu D, Balbo PE, Baricich A, Zeppegno P, Avanzi GC et al. Respiratory and psychophysical sequelae among patients with COVID-19 four months after hospital discharge. JAMA Netw Open 2021; 4: e2036142.
2 Mandal S, Barnett J, Brill SE, Brown JS, Denny EK, Hare SS et al. ‘Long-COVID’: a cross-sectional study of persisting symptoms, biomarker and imaging abnormalities following hospitalisation for COVID-19. Thorax 2021; 76: 396–8.
3 Wang Y, Jin C, Wu CC, Zhao H, Liang T, Liu Z et al. Organizing pneumonia of COVID-19: time-dependent evolution and outcome in CT findings. PLoS One 2020; 15: e0240347.
4 Vadasz I, Husain-Syed F, Dorfmuller P, Roller FC, Tello K, Hecker M et al. Severe organising pneumonia following COVID-19. Thorax 2020; 76: 201–4.
5 National Institute for Health and Care Excellence (NICE). COVID-19 Rapid Guideline: Managing the Long-Term Effects of COVID-19. London: NICE; 2020.