BRITISH JOURNAL OF HOSPITAL MEDICINE

Immunoglobulin-G4 related disease: an unusual cause of paediatric pneumonia

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A 10-year-old girl presented with dyspnoea, cough and excess sputum. The patient was subfebrile and physical examination revealed coarse breath sounds in both lungs. Laboratory analysis revealed an increased C-reactive protein level (1.6 mg/litre) and erythrocyte sedimentation rate (110 mm/h). Computed tomography of the chest showed bilateral peripheral lung opacities (Figures 1a and b). The patient was hospitalised with suspected COVID-19 pneumonia, but three consecutive swab samples were negative for COVID-19. An image-guided tru-cut lung biopsy was performed and histopathology showed that this was an immunoglobulin-G4-related disease. Prednisolone (1 mg/kg/day) was started, and the patient's symptoms improved rapidly. Follow up 6 months after discharge was uneventful.

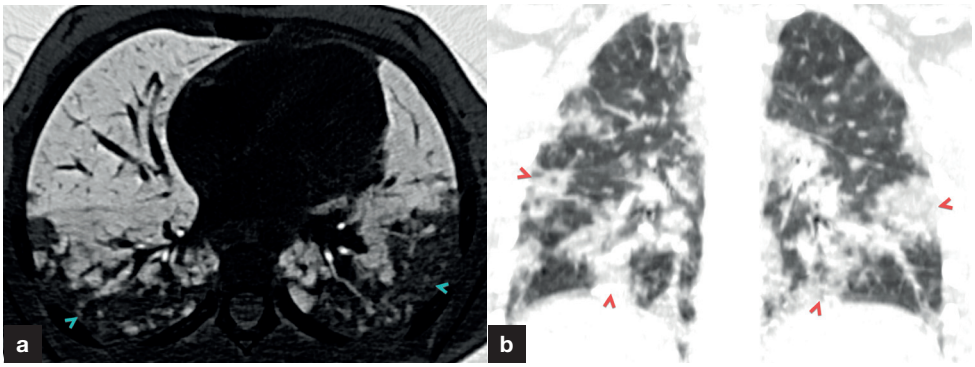

Figure 1. a. Axial and (b) coronal chest computed tomography images showing bilateral peripheral lung opacities, predominantly distributed in the lower lobes of the lungs (arrowheads).

Immunoglobulin-G4-related diseases are fibroinflammatory diseases characterised by intense infiltration of organs by plasma cells that express immunoglobulin-G4 (Martínez-de-Alegría et al, 2015). Although these diseases can affect many organs, pulmonary involvement is unusual (Muller et al, 2021). However, in light of this case, immunoglobulin-G4-related disease should be considered in the differential diagnosis of patients with pulmonary opacities, including children.

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How to cite this article:
Ufuk F, Tarnriseven E, Tanriseven EA, Okur DS. Immunoglobulin-G4 related disease: an unusual cause of paediatric pneumonia. Br J Hosp Med. 2022. https://doi.org/10.12968/hmed.2022.0091

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