Official Case Reports Journal of the Asian Pacific Society of Respirology
Respirology Case Reports
OPEN ACCESS

Multiple patchy pulmonary consolidation in granulomatosis with polyangiitis

Masahiro Yamasaki[1], Masaya Taniwaki[1], Shota Nakano[2], Naoko Matsumoto[1], Shinji Nabeshima[3] & Noboru Hattori[3]

[1]Department of Respiratory Medicine, Hiroshima Red Cross Hospital & Atomic-Bomb Survivors Hospital, Hiroshima, Japan.
[2]Department of Rheumatology, Hiroshima Red Cross Hospital & Atomic-bomb Survivors Hospital, Hiroshima, Japan.
[3]Department of Molecular and Internal Medicine, Institute of Biomedical & Health Sciences, Hiroshima University, Hiroshima, Japan.

Keywords
Antineutrophil cytoplasmic antibody, granulomatosis with polyangiitis, multiple patchy pulmonary consolidation, peri-bronchial consolidation.

Correspondence
Masahiro Yamasaki, Department of Respiratory Medicine, Hiroshima Red Cross Hospital & Atomic-Bomb Survivors Hospital, 1-9-6 Senda-machi, Naka-ku, Hiroshima 730-8619, Japan.
E-mail: myamasanjp@yahoo.co.jp

Received: 12 June 2020; Revised: 23 June 2020; Accepted: 26 June 2020; Associate Editor: Arata Azuma.

***Respirology Case Reports*, 8 (7), 2020, e00623**

doi: 10.1002/rcr2.623

Key message

Multiple patchy pulmonary consolidations that are unresponsive to antibiotics and/or exist at peri-bronchial sites and bloody bronchoalveolar lavage may effectively help clinicians diagnose granulomatosis with polyangiitis.

Clinical Image

A 79-year-old woman presented with malaise without fever, cough, or haemosputum. Chest radiography and non-enhanced computed tomography (CT) revealed bilateral multiple patchy peri-bronchial consolidation with air bronchograms (Fig. 1A–C). Laboratory examinations revealed leucocytosis and elevated C-reactive protein levels. Bacterial pneumonia was suspected; however, antibiotics were ineffective. Bronchoscopy revealed bloody bronchoalveolar lavage fluid (BALF; Fig. 1D), serum myeloperoxidase-antineutrophil cytoplasmic antibody (MPO-ANCA) levels were elevated (274 U/mL), and microhaematuria was detected; renal biopsy was not performed. Blood eosinophil counts were elevated and neurological symptoms were not found. Paranasal sinus CT demonstrated bilateral maxillary sinusitis. Histopathological examination of the transbronchial lung biopsy specimen showed no evidence of vasculitis; however, based on comprehensive assessment of clinical findings and application of the relevant American College of Rheumatology criteria of 1990, she was diagnosed with granulomatosis with polyangiitis (GPA). Intravenous cyclophosphamide and oral prednisolone therapy were initiated, markedly improving the disease.

GPA is an ANCA-associated vasculitis. Although most patients have proteinase 3-ANCA, MPO-ANCA-positive GPA is prevalent, especially in Japan. Pulmonary imaging commonly shows nodules with cavities, multiple patchy pulmonary consolidation in peri-bronchial sites, and occasional air bronchograms [1]. These features, in addition to bloody BALF (which indicates pulmonary alveolar haemorrhage), may help clinicians effectively diagnose GPA [2].

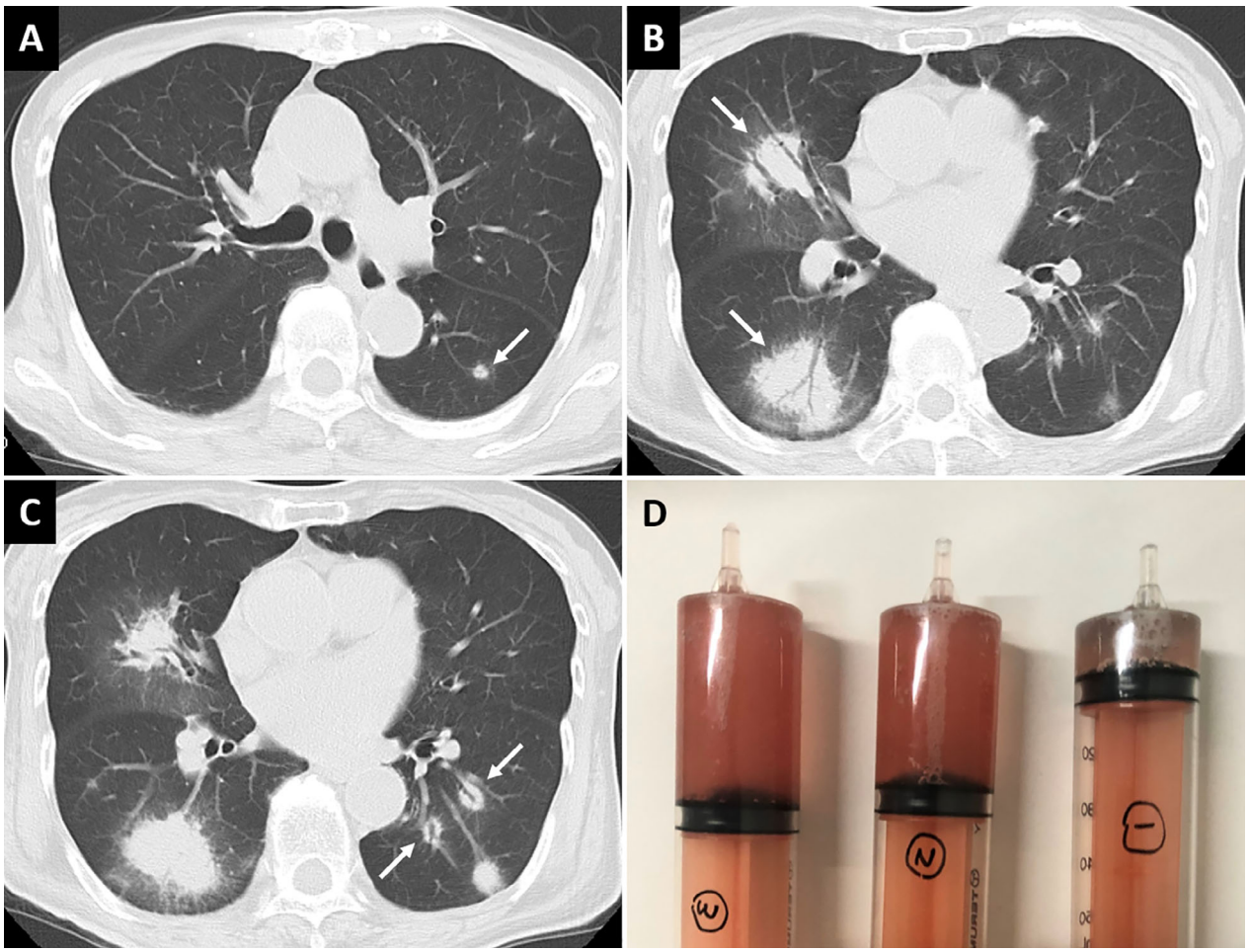

Figure 1. (A–C) Computed tomography image of the multiple patchy peri-bronchial consolidations with air bronchograms (arrows). (D) Bloody bronchoalveolar lavage fluid with increasingly intense bloody discolouration in sequential aliquots, indicating pulmonary alveolar haemorrhage.

Disclosure Statement

Appropriate written informed consent was obtained for publication of this case report and accompanying images.

Acknowledgment

We would like to thank Editage (www.editage.jp) for English language editing.

References

1. Ananthakrishnan L, Sharma N, and Kanne JP. 2009. Wegener's granulomatosis in the chest: high-resolution CT findings. Am. J. Roentgenol. 192:676–682.
2. Schwarz MI, and Brown KK. 2000. Small vessel vasculitis of the lung. Thorax 55:502–510.