VIA MEDICA

IMAGE IN CARDIOVASCULAR MEDICINE

Cardiology Journal
2022, Vol. 29, No. 2, 364–365
DOI: 10.5603/CJ.2022.0019

ISSN 1897–5593
eISSN 1898–018X

A case of apixaban-associated idiopathic interstitial pneumonia

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A 77-year-old man had worsening cough and dyspnea for 3 weeks; a history of atrial fibrillation; and received acetylsalicylic acid for > 6 years. Two months prior, he had received apixaban (5 mg twice daily) instead of acetylsalicylic acid. High resolution computed tomography (HRCT) showed bilateral ground-glass opacities accompanying multiple thin-walled air-filled cysts and patchy consolidation (Fig. 1A). Blood tests revealed no remarkable findings. The initial radiographic impression was pulmonary hemorrhage or pneumocystis pneumonia (PCP); thus, apixaban was withdrawn. After 2-week empirical treatment of broad-spectrum antibiotics and trimethoprim-sulfamethoxazole, respiratory symptoms and imaging findings deteriorated severely (Fig. 1B). Bronchoalveolar washing revealed no hemorrhage or PCP and it was compatible with idiopathic interstitial pneumonia (IIP). Without other explanations, apixaban had to be suspected to cause IIP. Apixaban was withdrawn and methylprednisolone pulse therapy improved the symptoms dramatically. Two-week follow-up HRCT revealed striking resolution (Fig. 1C). One month after discharge, chest X-ray showed complete recovery (Fig. 1D).

Drug-induced IIP is diagnosed by clinical history, radiographic and histological findings. The radiological findings and clinical course of this patient corresponded with those of IIP, a drug-stimulation test was not conducted though.

Since the approval of apixaban, its use has increased exponentially. A few worldwide case reports and 49 cases in post-marketing survey of Japan have been published with apixaban-associated IIP. This is the first IIP report among Korean users. The patient recalled mild effort-related dyspnea coinciding with initial apixaban administration. Regardless of unusual situation, its association with respiratory symptoms and IIP should be considered in apixaban users.

Funding: This paper was supported by Fund of Biomedical Research Institute, Jeonbuk National University Hospital.

Conflict of interest: None declared

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Received: 13.08.2021 Accepted: 11.10.2021

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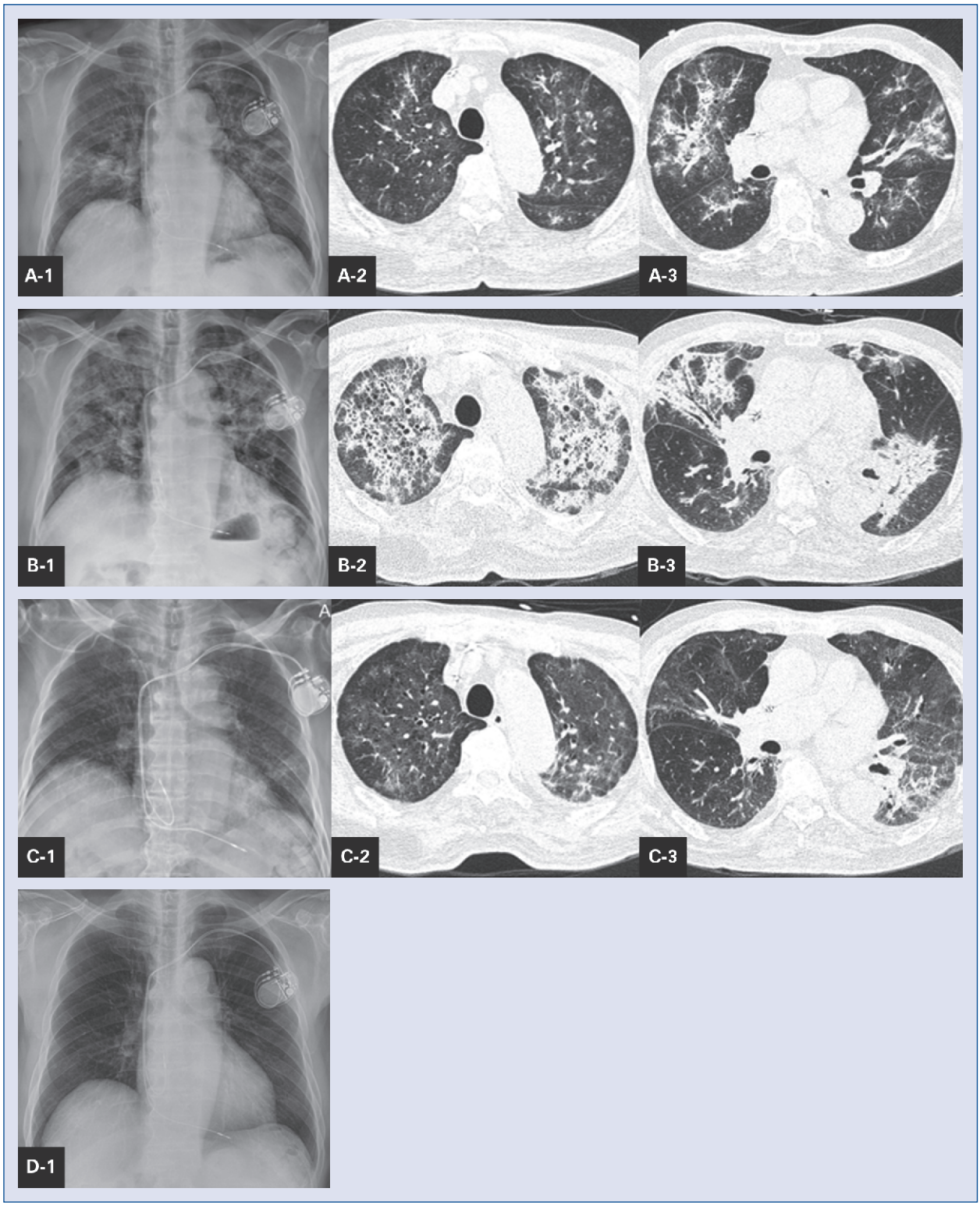

Figure 1. A. Chest X-ray and high-resolution computed tomography (HRCT) findings from the first medical examination; **B.** Follow-up chest X-ray and HRCT findings obtained 2 weeks later; **C.** Follow-up chest X-ray and HRCT findings obtained after withdrawal of apixaban and pulse therapy with methylprednisolone; **D.** Follow-up chest X-ray obtained 1 month later showed a complete recovery.