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Anti-MDA5 antibody dermatomyositis: PET findings of early interstitial lung disease

Hallazgos de la tomografía por emisión de positrones (PET) en la dermatomiositis con anticuerpos anti-MDA5 y enfermedad pulmonar intersticial temprana

Wan-Hao Tsai[a,b], Chiehyu Shen[b,*]

[a] Division of Immunology and Rheumatology, Fu Jen Catholic University Hospital, New Taipei City, Taiwan
[b] Division of Rheumatology, Immunology, and Allergy, Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan

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A 44-year-old woman presented with intermittent fever, dry cough, skin rash, and arthralgia for one month, without dyspnea. Laboratory tests revealed positive anti-MDA5 antibodies (3+, 120 units) via a myositis panel (LIA, Euroimmun®, 16 antigens), confirming the diagnosis of dermatomyositis. High-resolution chest CT showed mild bronchiectasis, interlobular reticulation, and patchy ground-glass opacities in both lower lobes (Fig. 1A and B). Although PET-CT is not routinely indicated in all cases of inflammatory myopathy, it was performed in this case as part of malignancy screening due to increased malignancy risk in dermatomyositis.[1] Unexpectedly, PET revealed moderate-to-intense hypermetabolic activity (SUVmax 4.8) in the posterior lung fields, suggesting inflammatory interstitial lung disease (ILD) (Fig. 1C and D). The radiological features were consistent with a non-specific interstitial pneumonia (NSIP) pattern. Anti-MDA5 dermatomyositis is strongly associated with rapidly progressive ILD[2] and this patient developed dyspneic symptoms in 3 weeks. This case highlights PET imaging as a potential adjunct tool for early ILD detection and may also provide information on the degree of inflammation versus fibrosis, potentially guiding treatment decisions, especially in patients with subtle symptoms and inconclusive CT findings.

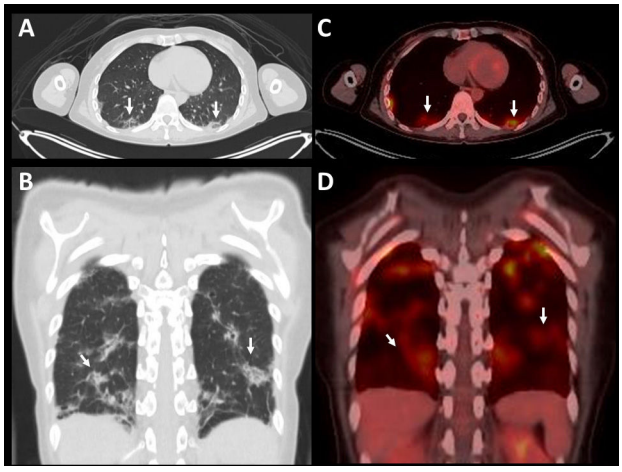

Fig. 1. (A) Chest CT (transverse view) shows bilateral lower lobe ground-glass opacities with mild bronchiectasis. (B) Coronal CT view highlights interstitial reticulation. (C) PET scan (transverse view) reveals hypermetabolic uptake in both posterior lung regions (SUVmax 4.8). (D) Coronal PET image confirms symmetric inflammatory activity in the lower lungs.

* Corresponding author.
E-mail address: tsichhl@gmail.com (C. Shen).

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Ethics approval and consent to participate

The patient gave written informed consent for the publication of this anonymized case and images.

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Conflict of interest

The authors declare no conflicts of interest.

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