

CASE REPORT

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A case of digital vasculitis in anti-synthetase syndrome (Anti-OJ subtype)

Deniz AK^{1*} and Richard J. Stratton^{1,2}

Abstract

Anti-synthetase syndrome is a rare autoimmune disorder characterised by the presence of autoantibodies against aminoacyl transfer RNA synthetases. We report a unique case of a 54-year-old woman with anti-OJ anti-synthetase syndrome, characterised by the atypical occurrence of digital vasculitis in conjunction with the classic manifestations of anti-synthetase syndrome. Our patient presented with digital vasculitis affecting the right third and fourth fingers, rapidly evolving interstitial lung disease of the organising pneumonia subtype, sub-clinical myositis, arthritis and mechanic's hands. Notably, she had no prior history of Raynaud's phenomenon. Serological tests revealed positive anti-OJ antibodies and weakly positive anti-MJ2 antibodies. Our patient's condition was managed with intravenous methylprednisolone then after stepped down to prednisolone and mycophenolate mofetil with successful therapeutic response.

Current literature primarily highlights Raynaud's phenomenon and vasculopathy-related ischemia, whether occlusive or non-occlusive in anti-synthetase syndrome. This case study identifies digital vasculitis as a distinctive complication of anti-synthetase syndrome, anti-OJ subtype. It emphasises the importance of recognising vascular complications, including vasculitis, even when classic signs like Raynaud's phenomenon are absent. Further research is crucial to fully understand the range of vascular manifestations associated with anti-synthetase syndrome.

Keywords: Anti-synthetase syndrome, Anti-OJ, Digital vasculitis, Vasculopathy, Organising pneumonia, Interstitial lung disease

Background

Anti-synthetase syndrome is a rare autoimmune condition characterised by the production of antibodies against aminoacyl transfer RNA (tRNA) synthetases. It is recognised as one of the disorders under idiopathic inflammatory myopathies [1]. Presentations can include interstitial lung disease (ILD), mechanic's hands, non-erosive arthritis, myositis, Raynaud's phenomenon, and

unexplained fever [2]. To date, eight known antibodies have been identified, including anti Jo-1 (Histidyl-tRNA synthetase), anti PL-7 (anti-threonyl-tRNA synthetase), anti PL-12 (alanine-tRNA synthetase), anti-EI (glycyl-tRNA-synthetase), anti-OJ (anti-isoleucyl-tRNA synthetase autoantibody), anti-KS (anti-asparaginyl-tRNA synthetase autoantibodies), anti-Zo (anti-phenylalanyl tRNA synthetase), and anti-HA/YRS (tyrosyl transfer-RNA (tRNA) synthetase) [1]. Anti-Jo-1 is the most common, while anti-OJ is among the less frequently observed antibodies [1]. In the literature concerning patients with anti-OJ antibodies, it has been observed that they typically either exhibit isolated ILD or, when myositis is present, it tends to manifest as a severe form [3]. Our patient

*Correspondence:

Deniz AK
Deniz.AK@nhs.net

¹Rheumatology, Royal Free Hospital London, London, UK

²Division of Medicine, University College London, London, UK



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