Dear Editors,

A 52-year-old female presented with an 8-month history of dyspnea, fever, muscle weakness, and arthralgia. Her past medical history was unremarkable. The patient did not report pruritus or a history of atopic disease or allergy. On clinical examination, we noted hyperkeratosis and fissures of the lateral aspects of fingers and fingertips consistent with mechanic’s hands (MH) (Figure 1a, b). She had symmetrical swollen and tender finger joints. The creatine kinase level and electrophysiological tests were normal. Testing for anti-nuclear antibodies (ANAs) revealed a speckled pattern with a titer of 1 : 320 and showed additional cytoplasmic fluorescence. Serological testing for antibodies yielded positive results for anti-Ro52 antibodies. Other antibodies to extractable nuclear antigens (ENAs), including anti-Ro60 (SS-A) antibodies as well as antisynthetase antibodies (anti-Jo1, anti-EJ, anti-OJ, anti-PL7 and anti-PL12) were negative on repeat testing. Computed tomography of the chest showed signs of interstitial lung disease (ILD) (Figure 1c, red arrowheads). Nailfold video capillaroscopy showed megacapillaries, elongations, and tortuosities consistent with a myositis pattern (Figure 1d, white arrowheads). A lung biopsy was performed and revealed non-specific interstitial pneumonia.

Treatment with high-dose prednisone and azathioprine was initiated and resulted in clinical improvement, but the patient relapsed with muscle weakness and arthritis after steroid tapering. By contrast, MH resolved quickly and did not recur. Since early rituximab (RTX) treatment has been associated with improved outcomes, specifically in patients with interstitial lung disease [1], RTX was administered at a dose of 1 g two weeks apart followed by azathioprine. Azathioprine was switched to mycophenolate moftil due to relapse of arthritis, muscle weakness, and steroid dependency. At present, the patient receives RTX at a dose of 1 g every six months as maintenance therapy.

The clinical picture was compatible with the antisyntethase syndrome (ASS), which is characterized by fever, Raynaud’s phenomenon, arthritis, myositis, ILD, and MH [2]. Typically, only some of these features are present at the time of diagnosis, as in the present case [3].

Antisynthetase antibodies are directed against tRNA-synthetases; of these, anti-Jo1-antibodies are reported most frequently [4]. Of note, the presence of anti-Ro52 antibodies is reported in up to 66 % of anti-Jo1-positive patients. Clinically, anti-Ro52/anti-Jo1-positive patients are characterized by early onset arthritis and the development of MH [4]. In addition, co-occurrence of anti-Ro52 antibodies and anti-Jo1-antibodies has been reported with severe myositis and ILD, as well as a poor prognosis [5].

While we cannot exclude the presence of very rare antisynthetase antibodies (e.g. anti-KS or anti-Zo), isolated anti-Ro52 antibodies have only been reported so far in 13 patients with typical clinical features of the ASS [5]. Interestingly,
patients with isolated anti-Ro52 antibodies seem to have a better prognosis with a lower risk of ILD and a higher response rate to immunosuppressive therapy. In that study, however, MH did not occur in the presence of anti-Ro52 antibodies without anti-Jo1 antibodies [5]. By contrast, in a recent study by Zampeli and coworkers, the presence of anti-Ro52 antibodies was associated with MH, but the exact prevalence of isolated anti-Ro52 antibodies was not reported [6].

Mechanic’s hands are usually observed in chronic occupational dermatitis, but are sometimes a dermatological clue indicating inflammatory myositis. Clinicians should therefore look actively for extracutaneous findings in the presence of MH, which should prompt testing for antibodies associated with myositis. In addition, nailfold video capillaroscopy has been confirmed as a valuable and non-invasive tool to support the diagnosis of ASS, as in this case [7]. Clinicians should therefore maintain a high index of suspicion based on clinical findings. The present case highlights the need for accurate classification criteria for ASS, which are currently under development.

Conflict of interest
None.

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