Different clinical phenotypes in anti-melanoma differentiation-associated protein 5-associated positive dermatomyositis

Sirs,

Several studies have shown that patients, mainly Asian, with anti-MDA-5-positive dermatomyositis have an invariably high frequency of rapidly progressive interstitial lung disease (RP-ILD) (1-6).

However, we congratulate the recent publication by Yang *et al*. (7) entitled "Anti-melanoma differentiation-associated 5 gene antibody-positive dermatomyositis exhibit three clinical phenotypes with different prognoses." The first cluster was characterised by "mechanic's hand" and arthritis, whereas the second cluster was characterised by typical dermatomyositis and young age. These two clusters corresponded to more than half of the patient sample, and both had a low incidence (7.7%) of RP-ILD. In contrast, the third cluster consisted of elderly patients with fever, elevated erythrocyte sedimentation rate, C-reactive protein or ferritin, and the highest incidence (77.3%) of RP-ILD. Therefore, this study reinforces the idea that not all patients with anti-MDA-5-positive dermatomyositis have RP-ILD.

Herein, we share our experience of 270 patients with dermatomyositis from three Latin American centres (8). The prevalence of the anti-MDA-5 autoantibody was 25.4% and 48.6% in patients with dermatomyositis and clinically amyopathic dermatomyositis, respectively. Independent of these autoantibodies, the overall prevalence of ILD was 25.9%, and the frequency of RP-ILD was only 1.5%. In addition, a high frequency of "mechanic's hand" or joint involvement occurred in patients with anti-MDA-5-positive dermatomyositis, similarly to the first cluster of Yang *et al*. study (7). The risk of RP-ILD in patients with dermatomyositis may be associated with positive anti-MDA-5 autoantibodies (2-7). However, Yang *et al*. (7) and our studies (8) show that other factors may influence in RP-ILD prevalence in patients with dermatomyositis. Therefore, more studies are needed that characterise the relevance of anti-MDA-5 in patients with dermatomyositis - mainly an international study involving patients with different ethnicities and from different geographic areas.

P.A. Olivo Pallo, *MD*
S.K. Shinjo, *MD, PhD*

Division of Rheumatology,
Faculdade de Medicina FMUSP,
Universidade de Sao Paulo, SP, Brazil.

Please address correspondence to:
Samuel Katsuyuki Shinjo,
Division of Rheumatology,
Faculdade de Medicina,
Universidade de São Paulo,
Av. Dr. Arnaldo, 455, 3º andar, sala 3184,
Cerqueira César,
CEP 01246-903, São Paulo, SP, Brazil.
E-mail: samuel.shinjo@usp.br
ORCID 0000-0002-3682-4517

Funding. This work was supported by Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP) (no. 2019/11776-6 to S.K. Shinjo); Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq no. 303379/2018-9 to S.K.S.); Faculdade de Medicina da USP to S.K. Shinjo.

Competing interests: none declared.

References

1. MATSUSHITA T, MIZUMAKI K, KANO M *et al*.: Antimelanoma differentiation-associated protein 5 antibody leve lis a novel tool for monitoring disease activity in rapidly progressive interstitial lung disease with dermatomyositis. *Br J Dermatol* 2017; 176(2): 395-402. https://doi.org/10.1111/bjd.14882
2. LI Y, GAO X, LI Y, JIA X *et al*.: Predictors and mortality of rapidly progressive interstitial lung disease in patients with idiopathic inflammatory myopathy: a series of 474 patients. *Front Med* (Lausanne) 2020; 7: 363. https://doi.org/10.3389/fmed.2020.00363
3. SATO S, HOSHINO K, SATOH T *et al*.: RNA helicase encoded by melanoma differentiation-associated gene 5 is a major autoantigen in patients with clinically amyopathic dermatomyositis: Association with rapidly progressive interstitial lung disease. *Arthritis Rheum* 2009; 60(7): 2193-200. https://doi.org/10.1002/art.24621
4. GONO T, KAWAGUCHI Y, SATOH T *et al*.: Clinical manifestation and prognostic factor in anti-melanoma differentiation-associated gene 5 antibody-associated interstitial lung disease as a complication of dermatomyositis. *Rheumatology* 2010; 49(9): 1713-9. https://doi.org/10.1093/rheumatology/keq149
5. LABRADOR-HORRILLO M, MARTINEZ MA, SELVA-O'CALLAGHAN A *et al*.: Anti-MDA-5 antibodies in a large mediterranean population of adults with dermatomyositis. *J Immunol Res* 2014; 2014: 290797. https://doi.org/10.1155/2014/290797
6. HALL JC, CASCIOLA-ROSEN L, SAMEDY LA *et al*.: Anti-melanoma differentiation-associated protein 5-associated dermatomyositis: expanding the clinical spectrum. *Arthritis Care Res* (Hoboken) 2013; 65(8): 1307-15. https://doi.org/10.1002/acr.21992
7. YANG Q, LYU K, LI J *et al*.: Anti-melanoma differentiation-associated 5 gene antibody-positive dermatomyositis exhibit three clinical phenotypes with different prognoses. *Clin Exp Rheumatol* 2022; 40(2): 304-8. https://doi.org/10.55563/clinexprheumatol/df2oc3
8. OLIVO P, HOFF L, BORGES I *et al*.: Characterization of patients with dermatomyositis according to anti-melanoma differentiation-associated gene-5 autoantibodies in centers from 3 Latin American countries: A cohort study. *J Clin Rheumatol* 2022; 28(2): e444-8. https://doi.org/10.1097/rhu.0000000000001756