Systemic sclerosis and myositis as a paraneoplastic syndrome secondary to multiple myeloma

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To the Editor,

Neoplasms may be associated with a variety of musculoskeletal symptoms and certain rheumatic diseases may even constitute a paraneoplastic syndrome[1].

This case report relates to a patient with presumable paraneoplastic systemic sclerosis (SSc) and myositis caused by multiple myeloma (MM), with improvement after neoplasm treatment.

A 52-year-old man presented with proximal muscle weakness, fatigue, dyspnoea, Raynaud's phenomenon and telangiectasias along with weight loss over 4 months. Blood tests revealed elevated creatinine kinase and erythrocyte sedimentation rate, normal C-reactive protein and negative autoantibodies. A muscle biopsy was obtained. Prior to the histological results, prednisolone 1mg/kg/day was started due to suspicion of an inflammatory myopathy, with transient clinical and analytical improvement. However, muscle biopsy was compatible with macrophagic myofasciitis. An IgM monoclonal peak was identified and bone marrow aspirate was compatible with a monoclonal gammopathy of undetermined significance (MGUS). Afterwards, he was hospitalized due to an acute limbic encephalopathy. After excluding vascular or infectious causes, corticosteroids were initiated with clinical improvement.

Two years after the onset of symptoms, the patient was first evaluated in our Rheumatology department. He presented with microstomia, sclerodactyly, limited cutaneous thickening and proximal muscle weakness. Immunology remained negative and there was no evidence of other organ involvement. Nailfold capillaroscopy showed an active phase scleroderma pattern. A second muscle biopsy revealed mild myopathic changes and positivity for major histocompatibility complex class I.

Thus, a SSc and myositis overlap syndrome was assumed as the most likely diagnosis. However, regarding the atypical clinical picture and monoclonal peak persistence, a reassessment by Haematology was requested. A medullary biopsy was performed and a MM IgG-Kappa was diagnosed. Six cycles of combined therapy with cyclophosphamide, bortezomib and dexamethasone were followed by autotransplantation. Even before autotransplantation, skin and muscle changes improved, with no further relapses and free of medication.

Rheumatic paraneoplastic syndromes comprise diseases or symptoms that are not caused directly by the tumour, but induced by substances secreted by the neoplasm or by associated immunological disturbances[2–4]. Generally, it appears simultaneously or no longer than two years before the diagnosis of the malignancy[1,4]. The temporal relationship between the neoplasm detection and the rheumatic symptoms is the main issue to classify a rheumatic disease as truly paraneoplastic[4]. Nevertheless, the best evidence is established when it is possible to eliminate the neoplasm and the symptoms resolve with antineoplastic treatment[1,4].

In the literature there are rare reports on the coexistence of MM or MGUS and paraneoplastic rheumatic syndromes[1–8]. To the best of our knowledge, this is the first report of simultaneous paraneoplastic SSc and myositis associated to MM.

In this case, the clinical presentation was very suggestive of SSc and myositis. However, auto-antibodies negativity and lack of organ involvement challenged the diagnosis. The first muscle biopsy was suggestive of macrophagic myofasciitis, however there was no history of exposure to an external stimuli and clinical picture was not typical[9].

We also hypothesize that the acute encephalopathy may have been in the context of malignancy, as des-

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cribed in literature for MM[10].

When a patient has a long-standing or atypical course of a rheumatic disorder, a history of malignancy, late onset of symptoms or a poor response to conventional treatment, a possible occult neoplasm should be considered. However, it is often difficult to differentiate from the idiopathic form[3].

Rheumatic paraneoplastic syndromes are rare but their recognition is of major importance as they often precede other manifestations and can facilitate a timely diagnosis and potential cure of the malignancy[4].

Although rare, "scleroderma-like" lesions or myositis may be associated with MM. This case highlights the importance of considering paraneoplastic syndromes in the differential diagnosis of patients presenting with signs of SSc and myositis.

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REFERENCES

1. Manger B, Schett G. Rheumatic paraneoplastic syndromes – A clinical link between malignancy and autoimmunity. Clin Immunol 2017;S1521-6616(17):30527–2.
2. Yang H, Peng Q, Yin L, Li S, Shi J, Zhang Y, et al. Identification of multiple cancer-associated myositis-specific autoantibodies in idiopathic inflammatory myopathies : a large longitudinal cohort study. Arthritis Res Ther 2017;19(259):1–9.
3. Ciołkiewicz M, Domysławska I, Ciołkiewicz A, Klimiuk PA. Coexistence of systemic sclerosis , scleroderma-like syndromes and neoplastic diseases. Pol Arch Med WEWN TRZNEJ 2008;118(3):119–125.
4. Manger B, Schett G. Paraneoplastic syndromes in rheumatology. Nat Rev Rheumatol 2014;1–9.
5. Colombo I, Fruguglietti ME, Napoli L, Sciacco M, Tagliaferri E, Volpe A Della, et al. IgD Multiple Myeloma Paraproteinemia as a Cause of Myositis. Neurol Res Int 2010;2010:10–2.
6. Paredes-Suárez C, Fernández-Redondo M, Vázquez Blanco M, Sánchez-Aguilar D, Toribio J. Multiple myeloma with scleroderma-like changes. JEADV 2005;19:500–502.
7. Casim Reyes CM, Rudinskaya A, Kloss R, Girardi M, Lazova R. Scleroderma-Like Illness as a Presenting Feature of Multiple Myeloma and Amyloidosis. J Clin Rheumatol 2008;14(3): 161–165.
8. Morais SA, Preez HE, Akhtar MR, Cross S, Isenberg DA. Musculoskeletal complications of haematological disease. Rheumatology 2016;55:968–981.
9. Rigolet M, Aouizerate J, Couette M, Ragunathan-thangarajah N, Aoun-sebaiti M, Gherardi RK, et al. Clinical features in patients with long-lasting macrophagic myofasciitis. Front Neurol 2014;5(230):1–7.
10. Law LY, Nagao KJ. Paraneoplastic acute disseminated encephalomyelitis associated with multiple myeloma. Mult Scler Relat Disord 2017;13:21–24.