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# Exceptional Paraspinal Localization of Myositis in a Patient With Crohn Disease Under Tumor Necrosis Factor $\alpha$ Inhibitor Treatment: A Case Report

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## -CLINICAL IMAGE

We report the case of a 22-year-old female patient who was hospitalized for intense inflammatory rachialgia evolving for 5 months and resistant to nonsteroidal anti-inflammatory drugs. There was no fever and no weight loss. The medical history consisted of Crohn disease (CD) diagnosed 5 years earlier, treated with budesonide and golimumab for the last 8 months, after the occurrence of immunoallergic adverse events with other tumor necrosis factor  $\alpha$  (TNF- $\alpha$ ) inhibitors and azathioprine. There were no peripheral musculoskeletal symptoms, no neurological or cutaneous signs, and no signs of activity of CD. Biological tests showed a C-reactive protein at 77 mg/L, normal CK, and aldolase counts. Anti-SRP (anti-signal-recognition particle) autoantibodies were positive.

The magnetic resonance imaging showed T2 short tau inversion recovery hyperintensity involving the thoracic and lumbar paraspinal muscles, but no abnormal signal in the thighs. There was no sign of spondylitis. The paraspinal muscle biopsy revealed an inflammatory infiltrate with T lymphocytes and macrophages, without any necrosis. Immunohistochemistry showed a diffuse positivity of class I HLA and a focal presence of C5b-9. The treatment of this polymyositis consisted of 3 pulses of methylprednisolone followed by oral prednisolone 1 mg/kg per day. It rapidly permitted a reduction of pain and biologic inflammation. Golimumab treatment was continued for CD. A steroid-sparing treatment consisting of intravenous polyvalent immunoglobulins monthly was implemented, allowing a sustained remission. No clinical or biological recurrence occurred at most 3 years later after the initial flare (Fig.).

The diagnosis and classification of myositis can be difficult, as there are overlapping forms and associations with other systemic diseases.<sup>1</sup> Here, the clinicobiological presentation was uncommon, with myalgia as a main complaint rather than muscle weakness, and with the absence of CK elevation. In contrast, anti-SRP antibodies are usually associated with severe and rapidly progressive muscle weakness with very high CK levels and a necrotizing form of myositis.<sup>1</sup> In this case, the biopsy rather showed suggestive signs of polymyositis, such as a ubiquitous expression of class I HLA, and mononuclear inflammatory cell infiltrates in the endomysium.<sup>1</sup> The peculiarity of this case also relied on the rare paraspinal localization of myositis, as it usually rather involves the proximal limb muscles.<sup>1</sup> There are few reports in the literature of paraspinal inflammatory myopathy.<sup>2-4</sup> In contrast with our case, all of them were revealed with camptocormia and dropped-head syndrome due to muscle weakness, rather than pain, and all of them had elevated CK. Some antinuclear antibodies were reported but no anti-SRP antibodies.

In the context of CD with a TNF- $\alpha$  antagonist treatment, the occurrence of myositis raised the question of an association with either the disease or the treatment. The association of myositis with other autoimmune diseases (lupus, rheumatoid arthritis, Sjögren syndrome) is widely described, and it can also occur in association with CD.<sup>2</sup> By contrast, myositis was treated as an independent entity, permitting a sustained remission. There are several reported cases of new-onset dermatomyositis or polymyositis during anti-TNF- $\alpha$  treatment.<sup>5</sup> In our case, golimumab treatment could not be interrupted, but it did not impede the remission obtained with immunoglobulins.



**FIGURE.** Spine magnetic resonance imaging (T2 short tau inversion recovery sequence). Thoracic and lumbar paravertebral muscles with hyperintensity suggesting muscle inflammation (illustrated in white arrow).

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