

Parsonage-Turner syndrome and inflammatory bowel disease: A possible physiopathological relationship

To the Editor,

Parsonage-Turner syndrome (PTS; also known as amyotrophic neuralgia) is an inflammatory disorder of the peripheral nervous system that mainly affects the upper limbs. PTS is characterized by the presence of shoulder pain and motor weakness. Although there is a hereditary form, the idiopathic form is more common, and an immunological origin is assumed in more than 50% of patients (1,2).

We report the case of a 56-year-old woman who presented with cervical pain with left shoulder radiation associated with less than 15° abduction ability of the left arm.

In her medical history, the only remarkable aspect was the presence of Crohn's disease since 1989, which had since been managed with infliximab.

A neurophysiologic study revealed the presence of left brachial plexitis (acute axonal neuropathy) that predominantly affected the superior and medial branches and resulted in impaired function of the muscles innervated by the C4, C5 and C6 roots. These findings were consistent with the diagnosis of PTS.

An MRI study showed a high-intensity signal in the infraspinatus muscle on STIR (Figure 1), suggesting denervation damage consistent with the neurophysiological diagnosis.

Analgesic and rehabilitation treatment were administered and resulted in improvement in the patient's pain symptoms; however, the neurological impairment persisted, resulting in poor recovery at the 12-month follow-up.

The physiopathology of PTS has not been clearly defined. The idiopathic form is considered an immunological disease. This hypothesis is reinforced by the

pathological findings of peripheral nerves that show a perineural infiltration of T and B lymphocytes in PTS patients (3). Other precipitant factors, such as infectious processes, surgery, trauma or exhausting exercise, have also been considered.

The reported case presents an immunological disorder that is responsible for the physiopathological events present in Crohn's disease. Furthermore, infliximab might also cause impairments of the immune system. Both situations can have adverse effects on the peripheral nervous system (4).

Despite the rare association between PTS and IBD (only one case has been reported) (5), the physiopathological features of the diseases suggest a possible relationship between them, and PTS may be a rare extra-intestinal manifestation of IBD. Another important consideration is the possibility that the neurological symptoms represent a complication of infliximab treatment, adding a new form of neuropathy to the possible adverse effects.

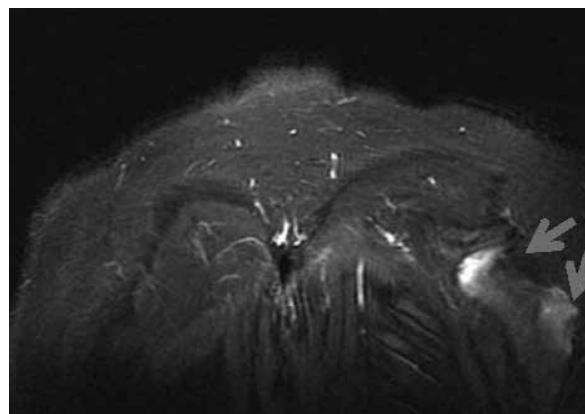


Figure 1. Magnetic resonance image of the left shoulder of the reported case. Coronal view on STIR (*short-time inversion recovery*). The STIR-weighted image showing a high-intensity signal in the infraspinatus muscle (*arrows*) suggests a denervation lesion. This finding is frequently reported in neuralgic amyotrophic patients, although it is not very specific.

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Further studies of neuralgia as a neurological complication of IBD and TNF- α treatment are necessary to establish a possible causal relationship.

Conflict of Interest: No conflict of interest was declared by the authors.

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