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An unusual case of unilateral myositis

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Abstract

We present an unusual case of unilateral myositis secondary to an L5 radiculopathy.

A 71 year old lady presented with pain and swelling in her right ankle twenty four hours after twisting it in a minor fall. Over six weeks the pain intensified and radiated to the knee and hip. There was paraesthesia in the left lateral aspect of the lower leg and dorsum of the foot, and tenderness around the ankle. There was some low back pain. The patient remained constitutionally well.

On examination of the right ankle there was soft tissue swelling posteriorly and movements were restricted. Power and sensation were intact. The right ankle jerk was not elicited. There was a good peripheral blood supply.

A magnetic resonance image (MRI) of the ankle showed oedema within the subcutaneous tissue over the postero-medial aspect of the ankle joint and the flexor retinaculum. There was no joint effusion and the tendons and ligaments were intact. An MRI of the lower legs revealed muscle oedema in the deep flexor, peroneal and gastroc-soleus compartments of the right calf only.

Routine bloods were normal and inflammatory markers were not raised. Creatine kinase was 312 IU/litre (25-200). Anti-nuclear antibodies were positive with a homogeneous pattern. Double stranded DNA, extractable nuclear antibodies and a myositis antibody screen were negative. An infection screen was negative.

The oedema in the right calf corresponded to the distribution of the tibial nerve. There was complete sparing of the muscles supplied by the common peroneal nerve. An electromyogram showed active denervation in L5 innervated myotomes and raised the possibility of an L5 root pathology. An MRI spine revealed a posterior disc protrusion at L4/5 compressing the right L5 nerve root.

This patient sustained a minor injury to her right ankle and may have injured her back simultaneously. She then developed complex regional pain syndrome and a unilateral myositis

secondary to an L5 radiculopathy. Eight weeks after her initial presentation her symptoms had settled spontaneously.

Focal myositis is rare and its etiology unclear. It can occur as a consequence of viral infections or due to denervation of the muscles. It has previously been reported in association with a radiculopathy. It most commonly occurs in the skeletal muscles of the lower limbs. Patients are usually constitutionally well and blood tests, including muscle enzymes, tend to be normal. MRI reveals muscle oedema and hypertrophy, and EMG shows myopathic changes. Biopsy of the affected muscles can show muscle fibre hypertrophy and atrophy, and inflammatory cell infiltrates. Focal myositis runs a benign course, normally resolving spontaneously between a few months to a few years. Non-steroidal anti-inflammatories, steroids and spinal surgery for cases associated with a radiculopathy, have been tried with mixed results.

Key learning points

Myositis that is unilateral is unlikely to be auto-immune in origin.

Focal myositis is rare.

It may be secondary to infection or to denervation of the muscles.

MRI of the affected muscles shows oedema and hypertrophy.

NSAIDs and steroids have been used with mixed results.

Spontaneous, but slow resolution is the norm.

protrusion at L4/5 compressing the right L5 nerve root.