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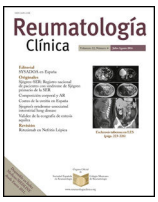

Letter to the Editor

Anemia and eosinophilia secondary to *Strongyloides* in a patient treated with anti-TNF-alpha☆

Anemia y eosinofilia secundaria a Strongyloides en un paciente tratado con anti-TNF alfa

Dear Editor,

The biological agents used to treat autoimmune diseases increase the risk of opportunist infections. *Strongyloides stercolaris* is a human intestinal nematode that is very common around the world. Although it appears more often in tropical and subtropical regions, it may also be present in temperate zones. Infection is usually asymptomatic or with mild symptoms (pruritus, abdominal pain, diarrhoea) accompanied by eosinophilia (70%). In immunodepressed patients it may cause a disseminated infection known as potentially fatal hyperinfection syndrome.[1]

We present the case of a patient with rheumatoid arthritis under treatment with adalimumab, methotrexate and glucocorticoids who underwent infestation by *Strongyloides.*

A 43 year-old woman resident in Spain but who often travels to her native country, Bolivia. She has double seropositive erosive rheumatoid arthritis which has evolved over 10 years. She had been treated with methotrexate, leflunomide and several biological drugs (etanercept, certolizumab and tocilizumab) all of which were primarily or secondarily ineffective. Due to maintained and documented eosinophilia since 2010 (10%–14%) an etiological study was performed that gave negative results (parasites in stool, *Strongyloides* and *Trypanosoma cruzi* serology). Given the epidemiological risk factor and pharmacological immunosuppression empirical antihelminthic treatment was indicated with ivermectin (200 μg/kg/day, 2 days). The patient did not attend the subsequent check-ups during several years. The patient is now under treatment with methotrexate, methylprednisolone 4 mg/day and adalimumab 40 mg/2 weeks. In January 2018 routine analysis found haemoglobin at 6.8 g/dl with anaemic syndrome, due to which she was admitted to hospital. The cause was attributed to metrorrhagia in the context of a uterine myoma that was surgically resected. The anaemia persisted after a course of iron supplements and surgery. There was also moderate eosinophilia at 14% (1500×10^9 eosinophiles), which had increased over the last year. The patient also mentioned digestive symptoms with episodes of liquid diarrhoea without pathological products in recent months. A study of parasites in stool was performed that was negative, while serology was IgG positive for *Strongyloides*. Infection by the said parasite was assumed and treatment with ivermectin was prescribed (200 μg/kg, repeated after 2 weeks). Once treatment had been completed the patient's digestive symptoms resolved, the levels of eosinophiles in the blood normalised and the anaemia was corrected.

3 cases are described in the Anglo-Saxon literature of patients with rheumatoid arthritis treated with anti-TNF alpha drugs who had infection by *Strongyloides*,[2–4] together with one case that occurred during treatment with glucocorticoids and methotrexate.[5] Although there is no study of *Strongyloides* prophylaxis in patients with rheumatic diseases under treatment with immunosuppressant drugs,[1] cases such as this one mean that European rheumatology and tropical medicine societies should promote the study of parasites in stool and *Strongyloides* serology prior to starting immunosuppressant treatment in all patients from endemic areas and native patients with eosinophilia.[6] It must be taken into account that negative serology in immunosuppressed patients does not rule out the diagnosis, and it is recommendable to monitor patients clinically to prevent relapses and evaluate possible repeat infections after travelling to their country of origin. Ivermectin at 200 μg/kg/d over 2 days is usually the treatment of choice. However, in immunocompromised patients longer courses of treatment or combined therapy with albendazol may be necessary.[7] Likewise, patients under treatment with biological agents who present symptoms similar to those described (eosinophilia whether accompanied or not by anaemia and digestive symptoms) should be subjected to differential diagnosis for infection by this parasite.[6]

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Águeda Prior-Español[a,*], Silvia Roure[b], Lourdes Mateo[a], Melania Martínez-Morillo[a]

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[a] Servicio de Reumatología, Hospital Universitari Germans Trias i Pujol, Badalona, Barcelona, Spain
[b] Unidad de Enfermedades Infecciosas, Servicio de Medicina Interna, Hospital Universitari Germans Trias i Pujol, Badalona, Barcelona, Spain

* Corresponding author.
E-mail address: agueda_88@hotmail.com (Á. Prior-Español).

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Relevance of a normal ultrasound study in patients with non-traumatic acute shoulder pain☆

Importancia de la ecografía normal en pacientes con dolor agudo de hombro de origen no traumático

Dear Editor,

Non-traumatic acute shoulder pain occupies an important place within emergency hospital visits, accounting for about 7% of all visits due to locomotor system problems.[1] Ultrasound scan is an extremely useful tool in the study of this complaint, complementing the preparation of a correct clinical history and detailed physical examination, permitting easily accessed confirmatory etiological identification with a precision comparable to that of magnetic resonance imaging.[2]

In general terms the most frequent cause of chronic shoulder pain is tendon disease (or tendinopathy). This definition covers all disease that alters fibrous tendon architecture.[2,3] While partial and complete tendon tears are often found in elderly patients, with or without fatty muscular degeneration, tendinosis tends to be found more often in younger patients (defined as the presence of changes in echogenicity in the fibrous structure or thickening of part or all of the tendon), or partial tears that break the continuity of the fibres.[3–5] Structural changes, fundamentally tendinous ones, can be detected in patients with acute or chronic omalgia, while in acute cases it is far more common to observe bursitis or bleeding in the biceps sheath.[6] Nevertheless, it is rare to encounter cases of acute shoulder pain in which the ultrasound scan of the shoulder is normal. In our recent experience we have identified 10 cases of patients with acute omalgia and normal shoulder ultrasound scan results whose final diagnoses were especially alarming. We believe it is relevant to report these cases due to their clinical importance (Table 1).

Two patients, both males aged 65 and 78 years old, had visited due to shoulder pain with mechanical characteristics. Both of them had been examined radiologically and they had received conservative treatment, with rest and first level analgesics. The 78-year-old male had asymmetry of the right supraclavicular triangle, corresponding to the painful shoulder (Fig. 1A and B). After a normal ultrasound scan of the shoulder, both patients were found to have primary tumours of the lung.

A 50-year-old Asiatic woman visited due to right shoulder pain. The physical examination and ultrasound scan of the shoulder were both normal. Given the lack of correspondence between the intensity of the symptoms and the normality of the ultrasound scan an X-ray was taken which showed right pneumothorax (Fig. 1C).

Two patients, a 55-year-old man and a woman of the same age and both immunocompetent, originally visited due to recent mechanical omalgia. They were eventually diagnosed as cases of sternoclavicular septic arthritis. Both cases were exhaustively described beforehand.[7] A third patient, a 48-year-old male, with a history of infection by human immunodeficiency virus and in antiretroviral treatment had sternoclavicular septic arthritis 2 weeks after having commenced with ipsilateral omalgia that a week afterwards led to study of the shoulder by ultrasound scan that was reported as normal.

Three patients, 2 men aged 40 and 22 years old, and a woman aged 45 years old, whose cases were described beforehand by our group,[8] visited due to acute shoulder pain with major functional repercussion. In all 3 cases the ultrasound scan report was normal. After neurophysiological studies they were diagnosed with Parsonage–Turner syndrome (PTS). Recently, a 60-year-old male patient who had recently received an anti-tetanus vaccination with immunoglobulin, had the same symptoms with normal results of ultrasound scan of the shoulder. The electrophysiological study was compatible with PTS. In our accumulated experience from 2011 to 2017, the volume of normal ultrasound scan reports corresponding to patients who visited the emergency department with acute shoulder pain (arbitrarily considered to have evolved during less than 3 weeks, due to the characteristics of the demand for care in our hospital) represents about 7% of all ultrasound explorations. The 10 cases we describe in this letter represent approximately one third of our normal number of normal reports. We believe that it is important to underline that in cases of acute omalgia, after a detailed clinical history and meticulous physical examination, that a normal ultrasound scan report should be followed by a broader diagnostic study, given that some differential diagnoses of shoulder pain with normal ultrasound scan results require prompt therapeutic intervention.

Table 1
Summarised description of cases of shoulder pain with a normal ultrasound scan.

Patient	Age (years), sex	Final diagnosis	Diagnostic medium
1	65, male	Lung cancer, small cell	Radiology, anatomopathology
2	78, male	Epidermoid lung carcinoma	Radiology, anatomopathology
3	50, female	Spontaneous pneumothorax	Radiology
4	55, male	Sternoclavicular septic arthritis	Microbiology
5	55, female	Sternoclavicular septic arthritis	Microbiology
6	48, male	Sternoclavicular septic arthritis	Microbiology
7	40, male	Parsonage–Turner syndrome	Neurophysiology
8	22, male	Parsonage–Turner syndrome	Neurophysiology
9	45, female	Parsonage–Turner syndrome	Neurophysiology
10	60, male	Parsonage–Turner syndrome	Neurophysiology

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