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HRCT-proven leflunomide pneumonitis in a patient with psoriatic arthritis and normal lung function tests and chest radiography

Sir, LEF is a DMARD utilized in the treatment of inflammatory arthritides such as RA and PsA. We note with interest the findings of a recent study published by Sawada et al. [1] concluding that pre-existing interstitial lung disease (ILD) and cigarette smoking are important risk factors for the development of LEF-induced ILD in Japanese patients with RA. There have been several other case reports and case series describing acute interstitial pneumonitis complicating LEF therapy for RA in Japanese populations. However, this complication appears to be extremely rare in the West [2, 3]. We present an unusual case of LEF-induced acute interstitial pneumonitis in a Caucasian patient with PsA with no history of ILD or cigarette smoking.

A 52-year-old Caucasian woman was referred to rheumatology with a 6-month history of pain and swelling of her hands. She was a life-long non-smoker. Her RF was negative and her CRP was mildly raised at 13.1 mg/l. Hand radiographs demonstrated early arthritic changes. On examination, the patient had psoriasis affecting the scalp and active synovitis of the MCP joints and PIP joints bilaterally. A diagnosis of PsA was made and she was commenced on MTX therapy. Four years after commencing MTX, LEF 20 mg od was added to her therapy due to disease progression. She had no LEF loading dose.

She had previously been intolerant of SSZ. Five months after commencing LEF, the patient complained of breathlessness, particularly on exertion. There was no dry cough. Clinical examination revealed her to be tachypnoeic, her pulse was 120 b.p.m. and regular, and auscultation of the chest was normal. Her saturations on air were 94% and blood gases revealed hypoxia with a PO2 of 10 kPa. Pulmonary function tests (PFTs) were within normal limits (forced vital capacity 2.95 l: 109% predicted; forced expiratory volume-1 2.55 l: 111% predicted; and carbon monoxide diffusing capacity 6.11: 81% predicted) and a chest X-ray (CXR) did not show any significant abnormalities. However, an high resolution CT (HRCT) of her chest performed within a week of the PFTs revealed a ground glass appearance throughout the lung fields consistent with an acute pneumonitis (Fig. 1).

The patient was admitted and received a course of i.v. methylprednisolone 1 g od for 3 days. Her MTX and LEF were stopped. After her i.v. corticosteroid she was started on prednisolone 40 mg od. She was commenced on a drug elimination regimen of cholestyramine 8 g tds for 11 days as she had not improved on corticosteroids alone. Currently, the patient’s respiratory symptoms have improved and she has been weaned off prednisolone.

Acute interstitial pneumonitis associated with LEF therapy is potentially fatal. We present a case of acute interstitial pneumonitis associated with LEF in a Caucasian patient with PsA. The patient had no pre-existing ILD and no history of cigarette smoking. The patient had normal PFTs and an unremarkable CXR. MTX is widely known to cause an acute interstitial pneumonitis, but the 4-year history of MTX therapy prior to symptoms and the temporal relationship between the introduction of LEF and symptoms suggest that LEF triggered this complication in this case. Clinicians should be aware that LEF can cause a potentially fatal pneumonitis and this complication should be considered in a patient with respiratory...
symptoms despite a normal CXR and PFTs. Drug elimination therapy may be required as LEF has a long half-life.

**Rheumatology key message**

- Normal PFTs and CXR do not exclude LEF-induced pneumonitis.

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**References**


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**Comment on: Musculoskeletal problems and work in the UK—time for a new approach?**

Sir, we are very supportive of the thrust of this editorial by Armstrong and Wilkie [1]. Many (including rheumatologists) define themselves, at least partly, by their work. Loss of work is of great concern for our patients, their families and the state. It is important that rheumatologists recognize when a patient is struggling to remain at work and are able to respond. They will also help greatly if they are aware of the need for expert help that young people with rheumatic conditions in transition to adulthood have in obtaining work.

Many of these issues were raised by the British Society of Rehabilitation Medicine (BSRM) in 2000 [2] and the rheumatological implications explored in our editorial [3] and subsequently incorporated in standards for the management of rheumatic disorders [4]. How does the rheumatologist put these recommendations into practice?

The first step is to take a work history when the patient is first seen [5], which involves understanding the nature of the current job, the physical tasks performed and the responsibilities involved. For many, the journey to work will be problematic. A young person’s aspirations for work need to be explored together with the training needed, essentially part of a transitional process needing a carefully coordinated approach. Although optimizing education is often the key to employment for those with physical impairments, other important considerations include the attainment of independent living (with/without the need for personal assistance), exposure to appropriate vocational opportunities and role models both in terms of achievement at work and also in family life, e.g. parenthood.

At each subsequent clinic visit, a simple enquiry as to any difficulties at work will suffice. However, this is frequently not done [6]. Difficulties reported should trigger the use of a Work Instability Scale appropriate to the diagnosis (there are scales for RA, AS and other diseases and situations [7]). For office workers, a specific scale has been devised. All scales were derived from qualitative interviews with patients having the conditions. These were subjected to modern psychometric analysis that has been developed by criterion validity and are easy and quick to use. They give an indication of low, medium or high risk of losing work. They can be used as screening tools or outcome measures—a need recognized in the editorial [1].

If work difficulties are revealed, or if the work is lost, referral should be made to the member of the multi-professional rheumatology team with designated responsibility, which must be reflected in their job plan. This person must have the time and authority to liaise across agency boundaries and the workplace, and have the experience and competencies to engage in worksite visits and discussions with employers. Although it is seen as good practice for employers to keep in touch with employees during sickness absence [5, 8, 9], employees may need to take the initiative. When the worker has been open with their employer in relation to their condition, then the Disability Discrimination Act applies and the employer is required to make ‘reasonable adjustments’ to their work.

Armstrong and Wilkie [1] rightly refer to the importance of using the biopsychosocial rather than the medical model of illness. The importance of function and participation in society is stressed by the World Health Organization’s International Classification of Functioning, Disability and Health, and provides a good framework allowing us to recognize that a range of interventions, not just medication, will be needed to help maintain our patients’ roles in society.

The window of opportunity to keep people in work is a mere few months, emphasizing the importance of minimizing delay for treatment and therapy. If the problem is complex, this will require the whole multi-agency approach that has been shown to be cost effective [5].

What are the component parts of the vocational rehabilitation that the authors refer to [1]? These are assessment, identification of goals and the planning of the rehabilitation process that will lead to goal attainment.