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4

Pain in systemic inflammatory rheumatic diseases

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A B S T R A C T

The sometimes intense, persistent and disabling pain associated with rheumatoid arthritis (RA) and spondyloarthritis frequently has a multifactorial, simultaneously central and peripheral origin, and it may be due to currently active inflammation or joint damage and tissue destruction caused by a previous inflammatory condition. The symptoms of inflammatory pain symptoms can be partially relieved by non-steroidal anti-inflammatory drugs, but many patients continue to experience moderate pain due to alterations in central pain regulation mechanisms, as in the case of the chronic widespread pain (CWP) characterising fibromyalgia. The importance of distinguishing CWP from inflammatory pain is underlined by the fact that drugs such as tumour necrosis factor inhibitors are expensive, and direct costs are higher in patients with concomitant CWP than in those without. The management of pain requires a combination approach that includes pharmacological analgesia, and biological and non-biological treatments

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because, although joint replacement surgery can significantly improve RA-related pain, it may only be available to patients with the most severe advanced disease.

Introduction

The sometimes intense, persistent and disabling pain associated with rheumatoid arthritis (RA) and spondyloarthritis (SpA) [1–4] frequently has a multifactorial, simultaneously central and peripheral origin, and it may be due to currently active inflammation, or joint damage and tissue destruction caused by a previous inflammatory condition. Inflammatory pain symptoms can be partially relieved by non-steroidal anti-inflammatory drugs (NSAIDs) or biological and non-biological disease-modifying anti-rheumatic drugs (DMARDs), but many patients continue to experience moderate pain due to alterations in central pain regulation mechanisms, as in the case of the chronic widespread pain (CWP) characterising fibromyalgia (FM) [3,4]. Non-inflammatory pain may also confuse the assessment of disease activity, and so treatment should be aimed at relieving painful symptoms as well as combating inflammatory disease.

The importance of distinguishing between central and inflammatory pain in patients with RA or SpA is underlined by the fact that these diseases are currently treated with expensive drugs such as tumour necrosis factor (TNF) inhibitors or other biological agents, and direct costs are higher in patients with concomitant CWP than in those without [3,4]. Optimal RA and SpA treatment must take into account symptoms such as CWP and the overall quality of life, and it requires a combination approach that includes pharmacological analgesia, and the use of biological and non-biological treatments because, although joint replacement surgery can significantly improve RA-related pain, it may only be available to patients with the most severe advanced disease [4].

Pain in RA and spondyloarthritis

Rheumatoid arthritis

RA is a common inflammatory joint disease that greatly affects the patients' quality of life and working productivity, and the use of health-care resources [1,2]. Most RA patients consider pain their greatest problem and highest priority [4–7], and it may even cause more disability than structural joint damage [8,9]. Pain is often considered a marker of inflammation, but the intensity of pain is only weakly correlated with measures of peripheral inflammation [10,11]; however, it is associated with disease activity, and it is known that radiographic changes may lead to future pain [12–15].

It is becoming increasingly possible to suppress the inflammation that causes pain, stiffness and progressive joint damage, and to ensure clinical remission [16], which, if rapidly achieved, improves long-term outcomes [17,18]. Clinical trials have shown that early intensive treatment with DMARDs and corticosteroids leads to better pain outcomes [19–22], especially when disease activity is regularly monitored: the level of pain tends to decrease if inflammatory disease is suppressed soon after RA is diagnosed, although it often does not completely disappear [23–26] and may subsequently return to its initial level. RA-related pain may occur spontaneously or be evoked when a joint is moved within its normal working range, and it may even be felt in apparently normal surrounding tissue. Further, referred pain syndromes have also been reported because the intensity of the symptom does not necessarily correlate with the severity of the underlying disease or the absence of disease exacerbations [27,28].

The pain may be worsened by damage to a joint caused by inflammatory disease or concomitant osteoarthritis (OA), and the prevalence of chronic, non-inflammatory pain syndromes such as FM is higher among patients with RA than in the general population [29,30]. Patients with inflammatory arthritis and FM are more likely to have more active disease and a poorer quality of life than those