

Case Report

Corticosteroids as a cause of Catastrophic Rheumatoid Arthritis

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Abstract

A 71-year-old woman has been using corticosteroids since the age of 25. After a fall, she developed multiple compression fractures of the spine. Despite the obvious bone deformities during the physical examination in upper limbs, she denied any pain. Radiologic and a CT-scan evaluation revealed catastrophic lesions with a completely destroyed joint and many intra-articular free bodies. Long-term corticosteroid use can bring on catastrophic results in bone structures and patients must be properly informed regarding the side effects.

Keywords: Rheumatoid arthritis; Corticosteroids; Side effects

1. Introduction

Rheumatoid arthritis (RA) is a lifelong immune-mediated inflammatory disease characterized by synovial inflammation causing a symmetrical, polyarticular arthritis, which leads to cartilage damage and joint destruction [1]. The prevalence of RA worldwide is approximately 1%, with an apparent reduction from north to south (in the northern hemisphere) and from urban to rural areas [2]. Treatment of RA includes three different classes of medications: conventional synthetic (cs) disease-modifying antirheumatic drugs (DMARDs) such as methotrexate (MTX), sulfasalazine (SSZ), and hydroxychloroquine; biological (b) DMARDs; and targeted synthetic (ts) DMARDs [3]. Corticosteroids are used in low doses to control inflammation as “bridge therapy” when starting DMARDs until DMARDs become effective or to treat sudden flares of joint pain.

2. Case Report

A 71-year-old woman has been using corticosteroids since the age of 25, after she was first diagnosed with rheumatoid arthritis. She was living in a rural, isolated area. Since then, she was controlling the pain on her own

using methylprednisolone tablets. After a fall, she was unable to walk and has been admitted to the rheumatology department for severe back pain. A computed tomography (CT)-scan of the spine revealed multiple compression fractures at the level of C7, T8 and L5. Interestingly, despite the obvious bone deformities during the physical examination in both elbows, wrists and fingers (Figure 1), she denied any pain in these joints while she was able to move them. Radiologic evaluation of the hands and elbows revealed catastrophic lesions (Figures 2). Moreover, the CT-scan of the left elbow showed a completely destroyed joint with many intra-articular free bodies (Figure 3). Long-term corticosteroid use can bring on catastrophic results in bone structures and patients must be properly informed regarding the side effects [4]. This patient developed side effects on conventional synthetic disease-modifying antirheumatic drugs (csDMARDs), and finally she was treated with an anti-tumor necrosis factor agent [5].



Figure 1: Bone deformities in both elbows, wrists and fingers.



Figure 2: Radiologic evaluation of the hands and elbows.



Figure 3: CT-scan of the left elbow.

3. Discussion

RA is the most common autoimmune inflammatory arthritis in adults and has a negative impact on the ability to perform activities on a daily basis. In the last few years, significant advances have been made in our understanding of the molecular mechanisms underlying RA pathogenesis. Thus, better and more effective treatments and strategies are constantly being added to the clinician's armamentarium in order to combat the knotty disease progression. Treat-to-target and tight control strategies are currently recommended in order to avoid cases such as the one presented above.

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