



Case Report

Recurrent uveitis under golimumab treatment in a patient diagnosed with axial spondyloarthritis: Is it a paradoxical effect?

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ABSTRACT

Anti-tumor necrosis factor drugs are highly effective in the treatment of spondyloarthropathies. In recent years, there have been reports of paradoxical effects with the use of these drugs. Herein, we report the first case of axial spondyloarthritis in whom recurrent attacks of panuveitis paradoxically developed under golimumab treatment in the light of literature data.

Keywords: Monoclonal antibodies; panuveitis; spondyloarthropathies; tumor necrosis factor- α .

Axial spondyloarthritis (SpA) can manifest with articular and extra-articular involvement. Uveitis is the most common extra-articular manifestation in axial SpA patients.^[1] Anti-tumor necrosis factor (anti-TNF) drugs are used to treat uveitis. However, there have been several reports of paradoxical development of uveitis following the initiation of anti-TNF drugs in the literature.^[2]

Golimumab is a human monoclonal antibody for TNF which is used in the treatment of inflammatory arthritis, including rheumatoid arthritis, psoriatic arthritis, and axial SpA as monotherapy or in combination with methotrexate.^[3] Herein, we report the first case of axial SpA in whom recurrent attacks of panuveitis paradoxically developed under golimumab treatment in the light of literature data.

CASE REPORT

A 22-year-old male patient who was under follow-up in our clinic with the diagnosis of axial SpA presented with lower back and hip pain which became worse recently. He was first admitted to our outpatient clinic, when he was 16 years old with lower back and left hip pain. His medical history revealed inflammatory

lower back pain and morning stiffness lasting for more than one hour. On physical examination, his vital signs were normal, and no abnormal sign was found in his systemic examination. Locomotor system examination revealed positive results for bilateral Gaenslen and pelvic compression tests. There was no limitation in the range of motion of the spinal or peripheral joints. His medical history and family history were non-specific. In the laboratory tests, complete blood count, erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), and liver and renal function tests were all within the normal range, and human leukocyte antigen (HLA)-B27 was negative. Magnetic resonance imaging (MRI) examination showed bilateral sacroiliitis. Since the patient had inflammatory lower back pain and bilateral sacroiliitis on MRI, he was diagnosed with axial SpA according to the Assessment of SpondyloArthritis International Society (ASAS) criteria.^[4] Indomethacin 100 mg/day and sulfasalazine 2 g/day were initiated. However, the patient was non-compliant with his medications, and he did not attend his scheduled follow-up visits on a regular basis. Finally, he was re-admitted to our outpatient clinic with worsening hip and lower back pain which did not improve, despite medical treatment.

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On physical examination, there was no limitation in the range of motion of the spinal or peripheral joints. The laboratory test results were as follows: CRP=37 mg/L (normal range: 0-8) and ESR=42 mm/hour with normal complete blood count, liver and renal function test results. The Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) score was 5.6, and the Bath Ankylosing Spondylitis Functional Index (BASFI) score was 4.4. An anti-TNF treatment regimen was planned. However, since the patient was willing to receive only single dose medication per month, treatment with golimumab was decided. The tuberculin skin test result was 0 mm and, after one month from the initiation of isoniazid treatment, golimumab treatment was initiated. At 12 weeks of treatment, the BASDAI score was found to decrease to 0.6, and BASFI score was found to decrease to 1.1. At four months of golimumab treatment, he developed redness in both eyes, impaired vision, and photosensitivity, and he was diagnosed with bilateral panuveitis by the ophthalmology department. Topical steroids and cycloplegic drops with oral steroid therapy were prescribed by the ophthalmologist. These symptoms improved with treatment; however, he developed bilateral panuveitis again at six months of golimumab treatment. Since the patient developed bilateral panuveitis twice under this treatment, golimumab was discontinued, and adalimumab, another anti-TNF drug, was initiated at a dose of 40 mg, once every two weeks. At nine months, the patient is still free from uveitis attacks and is on adalimumab treatment. A written informed consent was obtained from patient.

DISCUSSION

The most common extra-articular sign in the axial SpA group is uveitis and often occurs as unilateral anterior uveitis.^[1] The principal treatment of uveitis is topical treatment. Anti-TNF drugs are administered, when uveitis is refractory to topical treatment or recurs. Infliximab and adalimumab, the anti-TNF agents, have been shown to be effective in the treatment of uveitis in axial SpA; however, there is still controversy regarding the efficacy of etanercept.^[5]

Golimumab, a fully humanized anti-TNF inhibitor, offers the advantage of subcutaneous injection only once a month. The efficacy and safety profile of golimumab for SpA diseases, such as ankylosing spondylitis and psoriatic arthritis, are comparable

to other anti-TNF agents.^[3] There are several studies in the literature which report golimumab may be also effective in the treatment of juvenile idiopathic arthritis and Behçet's disease-related uveitis, and in HLA-B27-related uveitis.^[6]

In recent years, dermatological, intestinal, and ophthalmological paradoxical side effects of anti-TNF drugs have been addressed. These side effects are named as "paradoxical effects", since these disorders are both treated with anti-TNF agents and can be observed as side effects following the initiation of anti-TNF drugs. These paradoxical conditions include psoriasis, Crohn's disease, hidradenitis suppurativa, uveitis, and sarcoidosis.^[2,7]

In the literature, there are reports of uveitis as a paradoxical effect during the use of anti-TNF drugs, particularly for the treatment of SpA and with etanercept.^[8,9] Uveitis was often reported to be acute anterior uveitis and to occur after a mean 27 (range, 4 to 96) months following the initiation of the anti-TNF agent.^[8] In our case with axial SpA, the first uveitis attack occurred during the anti-TNF use at four months of the treatment. However, unlike previous reports, our case developed panuveitis which recurred at six months of the treatment. Since uveitis is a common extra-articular manifestation in SpA, we may speculate that it occurred during the anti-TNF treatment, as the disease was not under control, or the drug was ineffective. However, in our case, the first uveitis attack occurred following the initiation of golimumab treatment and he had two panuveitis attacks during golimumab, despite there was a marked improvement in the disease activity scores (i.e., BASFI, BASDAI) after the initiation of golimumab. In addition, the patient did not develop any uveitis attack after switching to another anti-TNF agent, suggesting that it is a paradoxical effect of golimumab treatment. More interestingly, to the best of our knowledge, there is no report of uveitis development as a paradoxical effect during golimumab treatment in the literature. Therefore, we acknowledge that this is the first case of axial SpA in whom recurrent attacks of panuveitis paradoxically developed under golimumab treatment.

In conclusion, uveitis may first appear during the treatment with anti-TNF agents, and this is particularly true for patients with SpA. Although such an effect has not been reported previously, development of uveitis for the first time during golimumab treatment should raise suspicion about a possible paradoxical effect.

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