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Letter to the Editor

Long-Term Corticosteroid Use in Rheumatoid Arthritis Associated with a Rare Complication: Bilateral Tibial Plateau Osteonecrosis

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Dear Editor,

Oral corticosteroid use has been associated with serious side effects such as osteoporosis, increased risk of infection, hyperglycemia, cardiovascular disease, and avascular necrosis (AVN).[1] Most of these side effects are dose- or duration-dependent; their incidence increases with higher doses or longer treatment durations.[2] It is particularly known that corticosteroids increase the risk of AVN. Avascular necrosis results in the death of bone marrow and trabecular portions due to limited blood flow.[3] According to the literature, the frequency of AVN in patients receiving corticosteroid therapy varies between 3% and 25%.[2]

Osteonecrosis of the tibial plateau is a rare condition, representing only 2% of all reported necroses in the knee.[4] In this article, we aim to discuss this rare condition through the development of bilateral tibial plateau osteonecrosis in a patient diagnosed with rheumatoid arthritis (RA) who has been using corticosteroids for a long time, and to emphasize its clinical significance.

Case: A 55-year-old female patient presented to us with bilateral knee pain and swelling that have been present for a long time and have worsened over the past month, especially during exercises. She reports partial relief with rest and the use of non-steroidal anti-inflammatory drugs.

The patient has been followed up at an external center with a diagnosis of seropositive rheumatoid arthritis (RA) for 16 years. It was determined that she has received various treatments at different times, including sulfasalazine, hydroxychloroquine, leflunomide, and methotrexate. For the past 1.5 years, she has been using tofacitinib citrate and indomethacin. Since the diagnosis, intermittently, she has used 4 mg and/or more methylprednisolone along with these treatments. There is no history of additional diseases other than RA.

Physical examination revealed bilateral swelling, crepitation, and limitation of extension in the knees. Muscle strength could not be evaluated due to pain around the knees. No neurological deficits or pathological reflexes were detected.

Laboratory tests revealed no abnormality except sedimentation of 48 mm/h, C-reactive protein of 15.3 mg/dL, severe microcytic anemia, and thrombocytosis. In the knee X-rays taken, AVN was detected in bilateral tibial medial plateaus. Avascular necrosis was not detected in knee X-rays taken last year. Since no trauma, alcohol, smoking, and comorbidities were found, it was thought that this rapidly progressive condition of the patient might be related to corticosteroid use.

Corticosteroids used in the initial treatment of RA are used as a "bridging" therapy because they rapidly suppress inflammation and symptoms before the slower-acting traditional synthetic disease-modifying antirheumatic drugs become effective and prevent radiographic damage progression.[5] However, considering that long-term use of corticosteroids, which are such an effective treatment option, can lead to serious side effects as seen in our case, we emphasize the importance of discontinuing their use as soon as possible in such patients.

Ethics Committee Approval: N/A.

Informed Consent: Written informed consent was obtained from the patient who agreed to take part in the study.

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