LETTER TO THE EDITOR

Varicella Zoster and Cutaneous Candida Infection in a Patient With Ankylosing Spondylitis Under Treatment With Secukinumab

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Ankylosing spondylitis (AS) is a progressive chronic inflammatory disease primarily affecting the axial skeletal system. Interleukin (IL)-23/IL-17 axis plays role in the pathogenesis of AS. Secukinumab, anti-IL-17A, is a new agent for treating spondyloarthritis. In this article, we present a patient who developed varicella zoster and cutaneous candida infection following secukinumab treatment.

A 26-year-old male patient presented with low back, hip pain and morning stiffness in 2013 and was diagnosed with AS upon family history, human leukocyte antigen B27 positivity and presence of bilateral grade 3 sacroiliitis radiographically. He had symptoms and complaints related to AS although he had taken non-steroidal anti-inflammatory drugs and sulfasalazine at therapeutic dosages for long-term. He had a modified Schober of 2 cm and a Bath Ankylosing Spondylitis Disease Activity Index of 5.7, with increased acute phase reactants (C-reactive protein: 4.95 mg/dL, erythrocyte sedimentation rate: 50 mm/hour). Secukinumab treatment was planned (150 mg/week for four weeks, followed by 150 mg/four weeks).

After the first dose, a painful, itchy, vesicular rash in the right thoracic 6-8 dermatomal regions evolved (Figure 1). The rash was evaluated by a dermatologist and diagnosed as ‘classical varicella zoster’. Secukinumab treatment was stopped and topical antiviral treatment was planned. After two weeks, the lesions completely regressed and secukinumab was resumed. In the fourth month of the treatment, an itchy hyperemic lesion, 10×7 cm in diameter, with active erythematous edge and pale in the middle over the left lower quadrant of the abdomen evolved (Figure 2). The patient was referred to a dermatologist again; candida spores were seen in the microscopic examination and diagnosed as ‘cutaneous candidiasis’. Secukinumab was stopped and systemic itraconazole plus topical sertaconazole treatment was started. After the treatment of cutaneous candidiasis, 50 mg/week subcutaneous etanercept treatment was started.

Secukinumab has been approved in AS treatment recently and started to be used in rheumatology practice. IL-17A has an important role in immune responses against mucosal and cutaneous infections. IL-17-mediated immunity is needed for the protection of the skin and mucous
membranes against *candida albicans*. Recurrent and persistent mucocutaneous candidiasis has been reported in patients who have genetic defects causing IL-17-related immune disturbances. For this reason, increased frequency of candida infections may be expected in patients treated with IL-17A antagonists.

In phase 3 studies of secukinumab on AS and psoriatic arthritis, candida infections are increased as expected. Candida infections were observed in 68 of the 3,133 patients. Most of these were oral, vulvovaginal and esophageal candidiasis. Cutaneous candidiasis was reported only in one patient. Case numbers have been determined to be higher in psoriatic arthritis studies.

To our knowledge, secukinumab studies lack any information about the development of varicella zoster infection. In our patient, dermatomal herpes zoster infection developed after the first loading dose of the treatment. Considering the increasing use of secukinumab in rheumatologic patient groups, prospective studies with more patients and longer follow-up are required to assess the risk of infections such as herpes zoster or candida.

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**REFERENCES**

7. McInnes IB, Mease PJ, Schett G, Kirkham B, Strand V, Williams N, et al. Secukinumab provides rapid and sustained pain relief in psoriatic arthritis over 2 years: