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Topic: Psoriasis

Cervical Smear Changes in Psoriasis Patients Using Biological Agents: A Retrospective Evaluation

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Introduction
Immunsuppression is one of the fundamental approaches in the treatment of psoriasis and other autoimmune diseases. Although currently used biological agents inhibit more selective pathways, their clinical effects are primarily exerted through immunsuppression. Considering the oncogenic effects of human papillomavirus (HPV) infections on the cervical epithelium, this is significant in terms of the risk of developing cervical dysplasia in immunosuppressed patients. A review of the current literature especially about new generation biological agents used in the treatment of psoriasis is limited. In this study, we aim to evaluate the changes in smear results of patients with psoriasis using biological agents.

Materials and Methods
This cohort study retrospectively examined female patients, aged 18-75 years diagnosed with psoriasis and using biological agents, who were followed up in the dermatology clinic of a tertiary university hospital between 2019-2024. Patients were grouped according to their demographic and clinical characteristics and the biological agents they used. Changes in smear results were evaluated according to the groups. Data analyzed statistically.

Results
This study enrolled 407 female patients. The mean age of the patients was 43.8 years, mean duration of the disease was 18.6 years, mean BMI was 29.03. The most frequently used agents in these patients were adalimumab (n=91), ustekinumab (n=89), ixekizumab (n=78), risankizumab (n=38), and infliximab (n=37), in that order. Pre- and post-treatment smear results were available for 130 patients. When the changes in smear results were examined, no statistically significant change was observed when comparing the first smears before and after treatment (mean time between smears: 2.1 years), and no significant change was detected in subsequent smear follow-ups.

Conclusions
The introduction of biological agents in the treatment of psoriasis is a significant milestone by improving treatment success. These drugs target specific immune pathways such as IL-17, IL-23, and TNF-α, providing high and sustainable PASI responses, increased patient compliance due to infrequent dosing, and favorable side effect profiles. Although they exhibit a safe side effect profile, cervical cancer screenings are routinely recommended before and during follow-up due to their immunmodulatory effects; however, the absolute necessity of these screenings remains controversial. Various studies exist in the literature regarding conventional and biological drugs used in other autoimmune diseases. Agents such as calcineurin inhibitors, systemic corticosteroids and azathioprine are known to increase the risk of HPV infection and cervical dysplasia. Studies on biological agents are mostly focused on rheumatoid arthritis and inflammatory bowel diseases, and data on psoriasis are limited. It is thought that biologics, particularly IL-23 and IL-17 inhibitors, may suppress local antiviral immunity (such as NK cells and CD8+ T cells) in the cervical mucosa to a more limited extent compared to other immunosuppressants, due to their selective blockade of the Th1/Th17 pathways in psoriasis patients. However, studies on the relationship between biological agents used in psoriasis treatment and HPV infections in cervical smear results are limited and mostly confined to individual cases and case series.

In this study no statistically significant change was found in the pre- and post-treatment smear results of the patients between Anti-TNF and Anti-IL groups. This supports the finding that the effect of targeted therapies used in psoriasis on cervical cytology remains more limited compared to other immunosuppressants in the literature. Although the biological agents we use in the treatment of psoriasis appear to be safe, more studies should be conducted on this subject. Additionally, recommending HPV vaccination and cervical cancer screenings to patients is of great importance.