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LETTER TO THE EDITOR

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Possible therapeutic choice of infliximab for psoriasis associated with autoimmune hepatitis

Dear Editor,

As a number of biological therapies have recently been available, better treatment options can be used for patients with various complications. Biological preparations for autoimmune diseases might paradoxically cause an autoimmune disease as an adverse effect. Here we report the first Japanese patient treated with biologics for psoriasis and autoimmune hepatitis (AIH). Treatment with infliximab (IFX) resulted in successful outcome in both conditions.

A 72-year-old woman with a seven-year history of AIH was diagnosed as having psoriasis 2 years ago. She was asymptomatic, but her medical examination revealed liver dysfunction (aspartate aminotransferase 461 U/L, alanine aminotransferase 430 U/L). Laboratory analysis revealed a positive antinuclear antibody titer, elevated immunoglobulin G and highly positive anti-double-stranded DNA antibody. Liver biopsy showed consistency with AIH, as inflammatory cells extended to the portal area. She was diagnosed as having

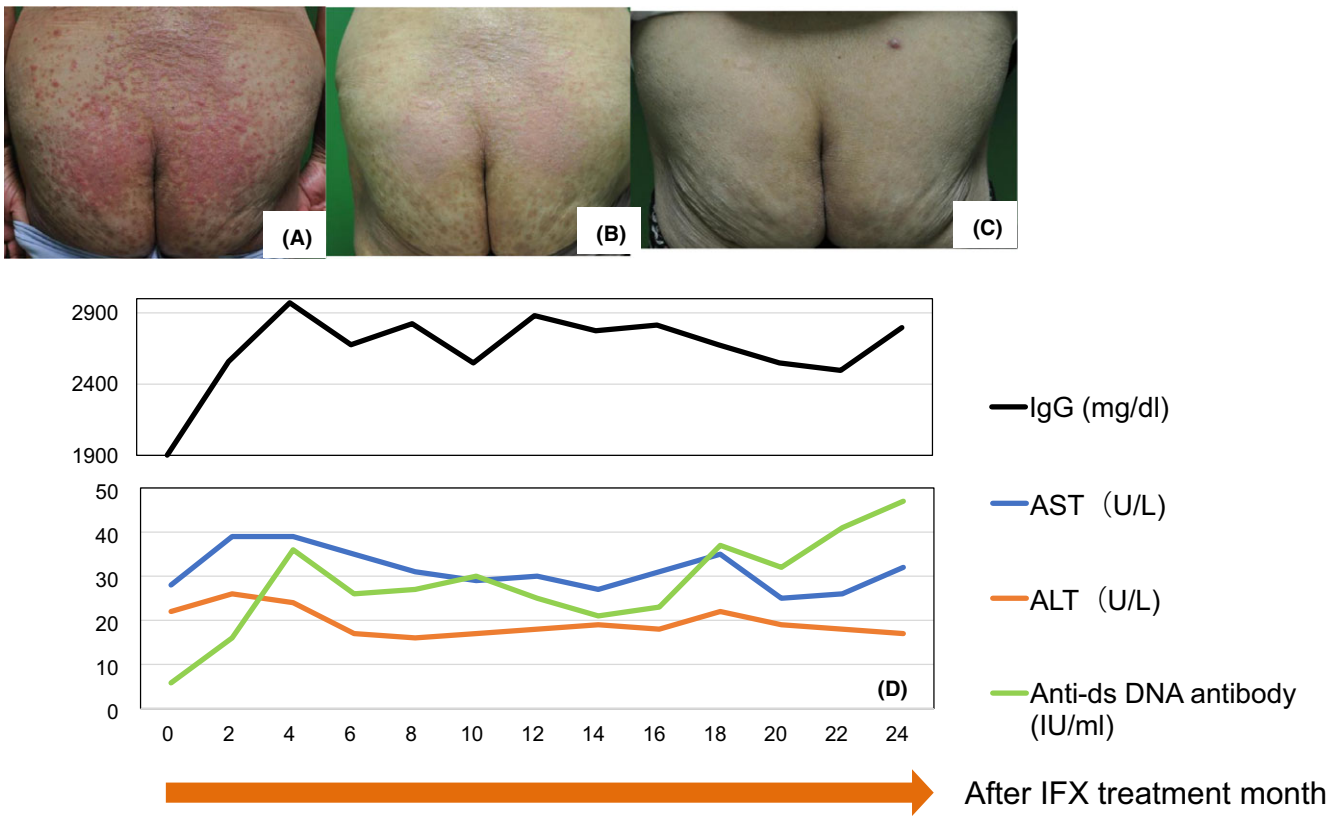

FIGURE 1 A, Clinical manifestation before and B, 3 months after and C, 6 months after IFX treatment. D, The changes of serum AST, ALT, IgG, and ds-DNA antibodies before and after IFX treatment. Liver enzymes (AST/ALT) were not changed, but anti-ds DNA antibodies and IgG level were gradually elevated. AST: aspartate aminotransferase (reference value, 13-30 U/L). ALT, alanine aminotransferase (reference value. 7-23 U/L); anti-dsDNA antibody, anti-double-stranded DNA antibody (reference value, 6 or less IU/mL); IgG, immunoglobulin G (reference value, 861-1747 mg/dL)

AIH, scored 18 points based on the diagnostic criteria of the International Autoimmune Hepatitis Group. Oral prednisolone at 30 mg/d was started along with cholagogue, and her liver dysfunction was improved.

At the age of 72, the patient was referred to our hospital to receive a biological agent because of exacerbation of psoriasis. At the initial examination, her liver enzymes were completely normalized (aspartate aminotransferase 21 U/L, aspartate aminotransferase 23 U/L) with prednisolone at 5 mg/d. The patient's Psoriasis Area and Severity Index (PASI) score was 32.8, and she had no pustules or arthritis. IFX was initiated at 5 mg/kg, and within a month, her skin condition and itching were improved remarkably. At 6 months, her PASI score was decreased to 3.0 (91.5% improvement; Figure 1A-C). IFX continued at a dose of 5 mg/kg every 2 months. During the 24-month observation period, her liver enzymes were not changed, although anti-double-stranded DNA antibody and immunoglobulin G level gradually were elevated (Figure 1D).

AIH is a disease producing chronic and progressive liver damage, resulting from an immune-mediated injury. Tumor necrosis factor-alpha (TNF-α) is a pro-inflammatory cytokine participating in the early inflammatory events at the onset of AIH in an animal model.[1] Some reports suggest that IFX would be a rescue therapy in patients with AIH unresponsive to standard steroid therapy.[2] On the other hand, AIH 19 cases that was induced by TNF-α inhibitors, in particular IFX (79% of cases), have been reported.[3] The mechanism underlying development of AIH is unknown; however, Yung et al[4] proposed the hypothesis that the suppression of Th1 response by TNF-α inhibitors leads to a shift to predominant Th2 response. Additionally, several animal and human studies have suggested that therapeutic inhibition of TNF-α allows humoral autoimmunity to be promoted by suppressing cytotoxic T-lymphocytes.[5] IFX thus has an induction potential of autoimmune diseases, but judging from its efficacy and safety as in the patient case, it is might be one of useful choices for patients with both psoriasis and AIH.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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