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Severe Psoriasis Successfully Treated with Brodalumab after Eradication of Hepatitis C Virus with Glecaprevir and Pibrentasvir: A Case Report

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Dear Editor:

Consensus has not been reached on adverse effects of biologics in patients with hepatitis C virus (HCV) infection. However, patients should be examined for HCV infection before biologic therapy and, if administration is necessary in HCV-positive patients, they should be carefully followed-up[1]. Regarding HCV treatment, new direct-acting antiviral agents (DAAs) are extremely effective and the rate of sustained viral response (SVR) is very high[2,3]. Here we report the first case of severe psoriasis successfully treated with brodalumab after the eradication of HCV with glecaprevir and pibrentasvir.

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A 62-year-old Japanese male, who had been diagnosed with chronic hepatitis C and psoriasis for 10 and 2 years, respectively, was referred to us in July 2018. His chronic hepatitis C had been treated with interferon and ribavirin ten years earlier with discontinuation. His psoriasis had been treated with topical corticosteroids and vitamin D3 with limited efficacy. Physical examination revealed scaly erythematous plaques on his back (Fig. 1A), chest, abdomen, and extremities. The psoriasis area and severity index (PASI) score was 16.8. Abnormal laboratory findings were as follows: aspartate aminotransferase (AST) 96 U/L (normal range, 13~30 U/L), lactate dehydrogenase (LDH) 299 U/L (normal range, 124~222 U/L), γ-glutamyl transpeptidase (γ-GTP) 210 U/L (normal range, 13~64 U/L), hepatitis B (HB) core antibody 6.02 signal-to-cutoff (S/CO), HCV antibody 14.20 S/CO, HB virus (HBV)-DNA not detectable, HCV-RNA 6.6 Log IU/ml (1B genotype). After our consultation to hepatologists, his chronic hepatitis C was treated with the new DAAs glecaprevir and pibrentasvir from November 2018 for 8 weeks. At 4 weeks after the treatment began, HCV-RNA value became undetectable and the levels of AST, LDH and γ-GTP returned to normal. After confirming the SVR in February

Fig. 1. Clinical features on the first medical examination (A) and three months after the treatment with brodalumab (B). We received the patient's consent form about publishing all photographic materials.

2019, therapy with the anti-interleukin-17 receptor antibody brodalmab was initiated for his psoriasis lesion. After three months of treatment, the PASI score became 0.9 (Fig. 1B) and the SVR was maintained.

HBV and HCV tests should be performed before administration of biologics[1]. This patient was HB surface antigen-negative but HB core antibody-positive, indicating the previous HBV infection that was healed clinically. For such patients, it is necessary to perform quantitative measurement of HBV DNA and confirm that it is undetectable before the initiation of biologics and to monitor it periodically[1]. Chiu et al.[4] screened 2,060 psoriasis patients who were taking biologics from 2009 to 2018. There were 358 psoriasis patients with HBV (561 treatment episodes) and 61 with HCV infection (112 treatment episodes). During 8,809 and 1,502 person-months of follow-up, there were 88 treatment episodes for HBV reactivation, and 14 episodes of HCV reactivation[4]. A systematic review of the literature disclosed that viral reactivation occurred in 3/97 patients with HCV infection (yearly rate 2.42%)[5]. Pescitelli et al.[2] reported a case with successful HCV eradication by the new DAAs daclastavir and sofosbuvir during the treatment of severe psoriasis with the tumor necrosis factor-α inhibitor etanercept. Now that highly effective new DAAs are available for chronic HCV, it is desirable to consult hepatologists and eradicate HCV before the initiation of biologic therapy for severe psoriasis.

CONFLICTS OF INTEREST

The authors have nothing to disclose.

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