

RESEARCH LETTER

Introduction of self-injection increases compliance with dupilumab administration in adult patients with atopic dermatitis: A single-center retrospective study



To the Editor: Dupilumab has demonstrated good efficacy¹ and effectiveness^{2,3} for adult patients with moderate to severe atopic dermatitis. However, it needs to be administered subcutaneously every 2 weeks. In Japan, self-injection of dupilumab has been available since May 2019. Without self-injection, patients need to visit physicians every 2 weeks; however, regular visits to a hospital or clinic are often hindered for various reasons. Self-injection at home can release patients from regular visits, which is expected to lead to higher compliance, but it has not been introduced in many clinics. In this study, we retrospectively investigated whether introduction of self-injection increases compliance to dupilumab administration.

Adult atopic dermatitis patients who were treated with dupilumab for more than 3 months before initiating self-injection (without self-injection) and were treated for more than 3 months after initiating self-injection (under self-injection) in our hospital as of January 31, 2020, were included in this study. Other inclusion criteria were the same as those described in our previous article.² All patients received a 600-mg loading dose of dupilumab; then, starting 2 weeks later, 300 mg of dupilumab was scheduled to be administered subcutaneously every 2 weeks. The compliance rate was calculated as follows: the number of actual administrations divided by the number of scheduled administrations $\times 100\%$. We calculated the compliance rates before and after initiation of self-injection during the same periods for each patient, and then compared the compliance rates before and after introduction of self-injection with Wilcoxon's matched-pairs signed rank test.

Data on 32 Japanese adult atopic dermatitis patients (28 men and 4 women) were analyzed. The mean age was 41.4 years (range 17-61 years), and the mean duration of atopic dermatitis at initiation of dupilumab was 38.9 years (standard deviation 10.4 years). The mean observed period, the period either before or after initiation of self-injection during

Compliance rate

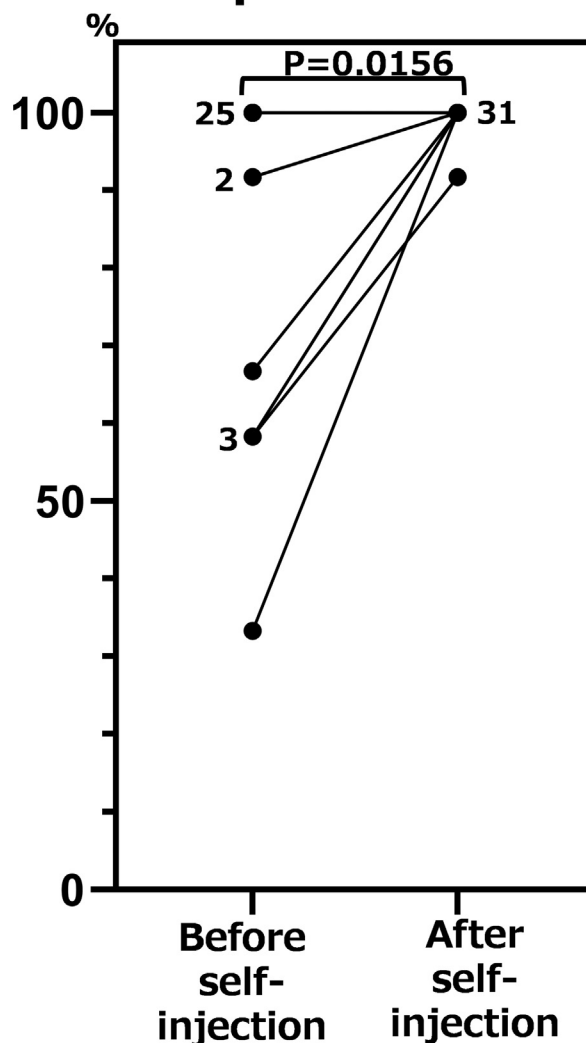


Fig 1. Comparison of compliance rates before and after introduction of self-injection of dupilumab in patients with atopic dermatitis treated with dupilumab. The number beside each dot represents the number of patients whose compliance rate was the same.

which we calculated the compliance rate, was 5.4 ± 0.92 months. After introduction of self-injection, the compliance rate of administering dupilumab improved in 7 patients and it worsened in none. The reasons why they could not visit our hospital before initiating self-injection could be categorized into 2 groups. Five patients could not visit because of inconvenience such as business or personal reasons. For 2 patients, the regular visit to our

hospital was interrupted because of problems related to health insurance. The compliance rate of administering dupilumab before introduction of self-injection was $92.4\% \pm 17.1\%$, and that after introduction of self-injection was $99.7\% \pm 1.47\%$, showing a significant difference ($P = .02$) (Fig 1). The percentage of patients with a compliance rate of 100% before introduction of self-injection was 78.1%, whereas that after introduction of self-injection was 96.9%.

Patient self-injection is associated with a wide range of benefits, including increased flexibility in the time and place of injection administration,^{4,5} which may have contributed to higher compliance. Furthermore, self-injection results in reduced cost to both the patient and health care system, reduced travel time, and reduced caregiver burden. These findings suggest that self-injection may be associated with improved compliance and therefore may be a better option for many patients.

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