

hygiene routines were performed more than 10 times/day, and 74.5% of HCW reported self-perceived hand skin damage [4, 7]. UK data showed that the prevalence of irritant hand dermatitis in hospitals caused by an increased frequency in hand washing and the use of ABHS was 62.5% [9]. In Germany, 90.4% of HCW were reported to have symptoms associated with acute hand dermatitis [10].

To date, more than 10 countries worldwide have published guidelines and recommendations for the prevention and treatment of hand skin lesions caused by frequent hand hygiene. Guidelines and recommendations are summarised hereafter.

Overall, HCW should avoid harsh washing with overly hot water, and prioritise the use of hypoallergenic foam cleansers or syndets with a pH of 5.5, which do not contain fragrances or antibacterial agents. After washing, hands should be gently dried without any friction or pressure, preferably using paper towels. ABHS with an alcohol concentration of at least 60% should be favoured and intense friction and pressure should be avoided. The use of gloves should preferably be limited to specific tasks, such as frequent contact with water or liquids, and cotton gloves should be used in addition, if necessary. Once protective gloves are taken off, hands should be washed and dried gently, as described previously.

Specific dermocosmetics are internationally recommended to restore, as quickly as possible, or prevent alteration of the skin barrier, the hydrolipidic layer and the cutaneous microbiome, due to frequent hand washing, the use of ABHS, and wearing of protective gloves. These prevent and reduce skin lesions caused by frequent hand hygiene measures, especially during the COVID-19 pandemic. Cleansers, moisturizers and repair creams provide maximum care of skin lesions on hands. To restore the natural skin barrier, fragrance-free, water-rich emollients or moisturizers with a pH of 5.5 should be used preferentially and should be applied as often as possible during work time and whenever hands are cleansed. Enriched formulations, such as specifically developed repairing balms which help to restore the microbiome and the natural skin barrier, may be used at home. To manage more severe forms, allergies, or secondary infections, treatment with topical corticosteroids in addition to emollients or moisturizers may be initiated, and patients with allergic reactions may be prescribed antihistamines. Secondary infections such as fungal and bacterial infections may be treated with antifungals or antibiotics.

Moreover, standardised educational programs may help to create awareness about skin damage due to hand hygiene. ■

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Mild hypertrichosis in both upper arms around dupilumab injection sites

Dupilumab is an anti-interleukin (IL)-4 and IL-13 receptor α antibody, which inhibits T helper 2 (Th2) reactions and is approved for the treatment of severe refractory atopic dermatitis. Dupilumab has also been shown to induce hair regrowth in patients with alopecia areata associated with atopic dermatitis [1-3], however, the mechanisms of hair regrowth in response to dupilumab in cases of alopecia areata still remain unclear. Recently, we investigated a patient with atopic dermatitis who developed hypertrichosis in both upper arms around the injection sites of dupilumab. A 49-year-old man was referred to our hospital for generalized erythema. He had suffered from atopic dermatitis from childhood. He had been treated with oral levocetirizine (5 mg/day) and topical delgocitinib ointment, but the erythema was unresponsive. Physical examination revealed

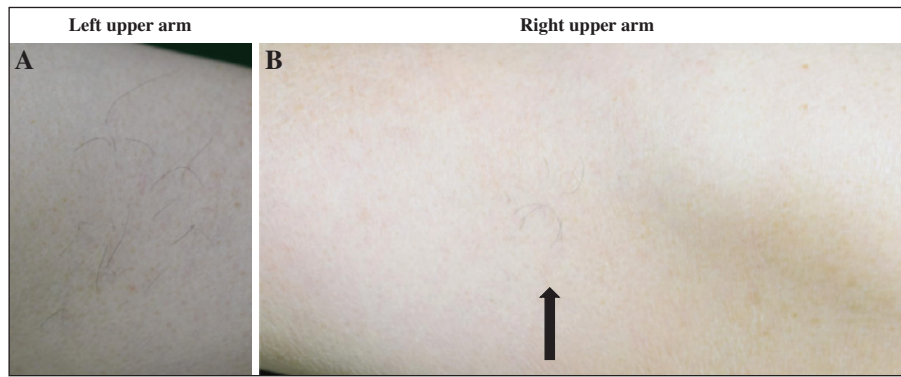


Figure 1. Mild hypertrichosis after four injections of dupilumab around the injection site on the left (A) and the right upper arm (B, arrow).

intensely pruritic, diffuse erythema. The Erythema Area And Severity Index (EASI) was 20.3 and erythema affected 40% of his body surface area (BSA).

After obtaining the patient's informed consent, we initiated treatment with dupilumab. Subcutaneous injections of dupilumab were administered (300 mg each) in both upper arms, where no hypertrichosis was seen. Subcutaneous dupilumab (300 mg) injections were continued every two weeks in the upper arms. After a total of four injections (including the initial one), the erythema subsided completely with an EASI score of 0, however, mild hypertrichosis in both upper arms was noticed around the injection sites (figure 1A, B). The patient refused a skin biopsy of the hypertrichotic area. At the initial visit, the patient also suffered from alopecia areata on the whole scalp. After the injections of dupilumab, hair shaft elongation was observed on the scalp.

A recent molecular profiling study of alopecia areata showed activation of both Th1 and Th2 reactions [4], moreover, a genome-wide study revealed that IL13 is a susceptibility locus for alopecia areata [5]. Dupilumab injections may decrease the number of circulating Th2 cells and improve the symptoms of both atopic dermatitis and alopecia areata.

In our patient, hypertrichosis appeared just around the sites of subcutaneous injections and no hypertrichosis appeared elsewhere on the arms. We cannot rule out the possibility that alopecia areata was present at the injection site, where hair shafts grew after the injections of dupilumab.

A decrease in the number of circulating Th2 cells may not be a cause of hypertrichosis in our case. IL-4 and IL-13 receptor α have been shown to be expressed in hair follicles by immunohistochemistry [6]. Further observations are needed in order to obtain clearer insight into this event. ■

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Localized bullous pemphigoid arising in traumatic wounds after a 15-year disease-free interval of classic bullous pemphigoid

Bullous pemphigoid (BP) generally presents as widespread blister formation (classic or generalized BP) [1]. In addition to classic BP, there are several variants of the condition, such as non-bullous BP [1, 2] and nodular BP [3]. Localized BP is a relatively rare variant of BP, in which the lesions develop only at localized sites [4]. The pathogenesis of localized BP is most likely similar to that of classic BP [5]. Here, we describe a unique case of localized BP, in which the patient developed localized BP lesions at the site of traumatic wounds 22 years after complete remission of classic BP.

An 85-year-old Japanese man sustained severe traumatic injuries on his right lower leg by his farm machinery, and was taken to the Kita-Harima Medical Center. He had been diagnosed with classic BP 22 years earlier. The classic BP had been treated with an initial prednisolone dose of 60 mg/day (1.0 mg/kg/day), with the dose gradually