

Natalizumab-Induced Pustular Psoriasis of Palms and Soles

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Introduction

Psoriasis and multiple sclerosis (MS) are both autoimmune T-cell mediated diseases that share a possible common genetic linkage [1]. Natalizumab is a recombinant humanized monoclonal antibody targeting the cell adhesion molecule $\alpha 4$ integrin and is labeled to treat MS. It is known that biological agents induce cutaneous adverse drug reactions. Although there is not a defined link between natalizumab and psoriasis, there are case reports describing a possible relationship [2]. Here, we report on a patient with MS who developed pustular psoriasis of palms and soles after natalizumab treatment.

Case Presentation

A 50-year-old woman presented with multiple millimetric pustules and scaling sited on erythematous plaques on the palms and soles (Figure 1A). Personal and familiar history for psoriasis was negative. She has been treated with natalizumab for 6 months for MS. Dermoscopy revealed yellow

globules and crusts along with the dotted vessels (Figure 1B). The patient was diagnosed with pustular psoriasis of palms and soles.

Discussion

Data on whether natalizumab can induce or aggravate psoriasis are limited. In literature, 2 of the cases developed plaque psoriasis while 1 patient had new-onset psoriatic arthritis during natalizumab treatment. Family history of psoriasis was positive in all patients. One patient affected by mild psoriasis had a severe flare-up after several natalizumab infusions [2]. Our patient, on the other hand, differs from those cases due to the absence of family history and the development of localized pustular psoriasis.

Although there are pieces of evidence showing common pathophysiological pathways in psoriasis and MS, it has been observed that treatment of one condition did not provide a parallel improvement in the other one. T helper 17 (Th17) cells are involved in the inflammation stage of both disease [1]. The pathophysiological mechanism between

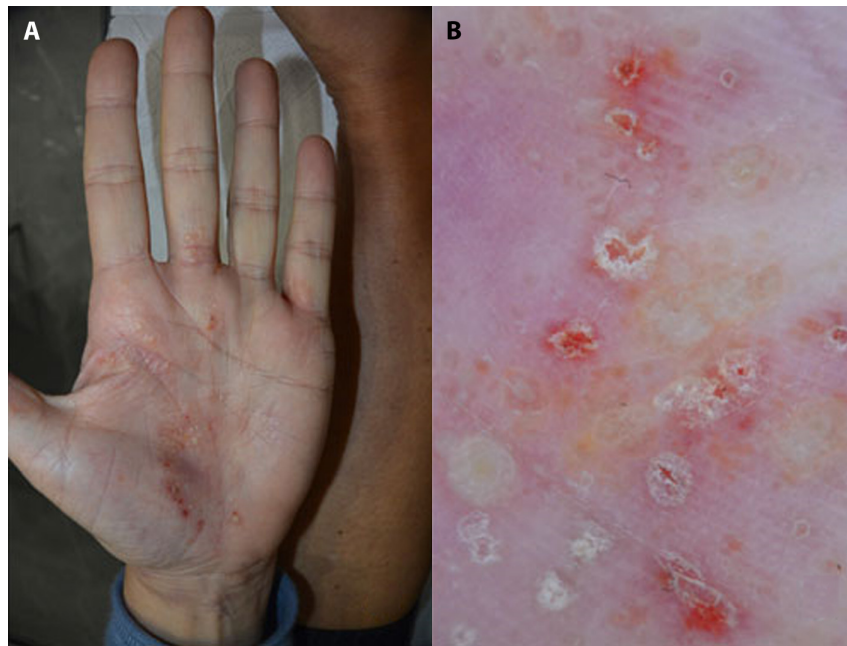


Figure 1. (A) Multiple pustules and crusting over the palm. (B) Dermoscopic image demonstrates yellow globules and crusts along with the dotted vessels.

psoriasis and natalizumab remains unclear but natalizumab has been associated with paradoxical activation of autoimmune disorders by pathologically stimulating the production of IL17 and increased activation of Th17 cells [2].

Conclusions

We highlight that a new onset of palmoplantar pustular psoriasis may also be a rare side effect of natalizumab. There is not enough data yet to make a recommendation regarding the consideration of psoriasis history in the patient or in the family when deciding for natalizumab treatment. More

research is needed to understand the relationship between natalizumab and psoriasis.

References

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