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Cutaneous complications of COVID-19 vaccines

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Dear Editor

The advent of COVID-19 pandemic led to global efforts for production of effective safe vaccines, avoiding at maximum both early and late potential ominous adverse effects to the public health [1]. The roll of approved vaccines includes Pfizer-BioNTech's (BNT162), Moderna (mRNA-1273), Oxford/AstraZeneca ChAdOx1 (AZD1222), Janssen (Ad26.COV2.S), and the Sputnik V [1, 2].

We read in recent issue of this Journal the narrative review by Mushtaq et al. (Infez Med. 2022; 30(1):1-10) based on PubMed and Google Scholar data from 2020 to 2021 about the adverse effects of COVID-19 vaccines [1]. The manuscript contributes to making more clearly major aspects of vaccines safety as well as the burden of more frequent adverse consequences of vaccines utilized in the whole world. Myocarditis, glomerular changes, and cutaneous eruptions are reported with mRNA vaccines [1]. An issue that called our attention was the dermatological manifestations post vaccination. Cutaneous reactions (n = 414) developed after mRNA vaccinations, more often delayed local reactions, urticarial and morbilliform eruptions; with 43% of recurrences after the second dose [1]. Lesions mimicking lupus pernio, chilblain, pityriasis rosea, zoster, and herpes simplex may occur, but similar changes were not emphasized with use of adenoviral Oxford/AstraZeneca ChAdOx1 nCoV-19 vaccine (AZD1222) utilizing the replication-deficient chimpanzee adenovirus ChAdOx1. Four studies performed in Brazil, South Africa, and the UK indicated an overall safety of this vaccine, with 168 severe complications affecting 79 recipients of AZD1222 and 89 controls; and the authors commented on rare cases of transverse myelitis, thrombocytopenia and thrombosis [1].

In this setting, one should comment a 76-year-old Brazilian female who presented a severe manifestation of herpes zoster initially affecting the site of the first dose of Oxford/AstraZeneca vaccine and further involving the whole left upper extremity, with an intense neuropathic pain [2]. She denied an antecedent of varicella-zoster virus (VZV) infection or previous episode of herpes zoster, and the first lesions appeared approximately one month after the administration of the vaccine. There was pruritus, rash, edema, erythematous plaques, and progressive crops of vesicles that were managed by betamethasone, antihistamine, meloxicam, paracetamol, and famciclovir [2]. As the levels of IgG and IgM against VZV were 3638.0 (normal: <135.0) and 0.43 (normal: <0.90) mIU/mL, respectively, the diagnosis was "COVID arm-like" due to vaccine-related herpes zoster. After the second dose of vaccine, applied on the right upper extremity, there was neither local nor systemic adverse reaction, and the control of COVID-19 neutralizing antibody test was 95% [2]. The authors highlighted the relationship of the herpes zoster lesions closely mimicking a "COV-

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ID arm" manifestation, which developed after the first dose of a ChAdOx1/AZD1222 vaccination [2]. Besides "COVID arm", they commented the roll of cutaneous disorders that may be associated with SARS-Cov-2 infection, including "COVID toe", chicken-pox-like lesions, erythema multiforme, livedo reticularis, maculopapular eruptions, morbilliform rash, pityriasis rosea, and urticaria [2]. Their conclusion was that early or delayed reactions do not contraindicate a second vaccine dose.

As a whole, the data of the manuscripts herein commented contribute to better knowledge about cutaneous disturbances related to SARS-Cov-2 infection as well as COVID-19 vaccination. "COVID arm" mimicking the herpes zoster can be associated both with infection and vaccination. In fact, the number of publications about dermatological changes due to the disease or secondary to vaccination has been relatively scarce, taking in account the global numbers of these two items. Researches focusing comparative data of adverse effects among the diverse vaccines are lacking.

Competing interests
The authors declare that they have no competing interests.

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