DERMATOLOGICAL SIDE EFFECTS OF COVID-19 VACCINATION

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Actuality. The latest and COV COVID-19 unfortunately, there is no single effective treatment for this disease, so the development of vaccines is relevant. Today, the most important component in the fight against COVID-19 infection is vaccination of the population. Of course, like any medication, the vaccine also has side effects. Side effects can be either local or general. Since usually the local manifestation is associated with the skin, the topic of our work is the dermatological side effects of the vaccine.

Aim. Identify the relationship between the effect of the vaccine and dermatological side effects.

Materials and methods. In the course of our work, we have processed and analyzed foreign and domestic literary sources related to this topic.

Results. First of all, it is important to note that serious skin adverse reactions are very rare, and the developed vaccines have a satisfactory safety profile. Most skin reactions go away on their own and require little or no therapeutic intervention. The immunogenic effect of vaccines leads to changes in the levels of chemokines and cytokines that activate various components of the innate and acquired immune system (i.e., different subgroups of T and B cells, histiocytes/macrophages, dendritic cells, eosinophils, etc.). The skin and mucous membrane as borders with the environment are largely affected by the overall activation of the immune system.
caused by vaccines. The most common skin reactions after the introduction of the COVID-19 vaccine are localized erythema, pain, swelling, urticaria, or maculopapular rash. The most common cases of dermatoses will be analyzed in this paper. One of these dermatoses is lichen planus. Lichen planus dermatosis is very common, defined by the influx of CD8+ T cells into the skin and mucosa, resulting in itchy papules and characteristic Wickham striae. Histologically, the "lichenoid" band of lymphocytes promotes inflammation along the dermo-epidermal junction, which leads to keratinocyte apoptosis. Although the etiopathology remains largely unknown, viral infections, including hepatitis B, have been associated with the condition for many years. Other triggers are medications and vaccines (hepatitis B, flu, fairy tale, and combination vaccines). Naturally, covid-19 vaccines can also cause this particular skin disease, because it leads to increased levels of interleukin-2, tumor necrosis factor-α, and interferon-γ, which are centrally involved in the development of lichen planus. More cases of this side effect can be expected with mass vaccinations against COVID-19 [4]. Another dermatosis that occurs in the post-vaccination period is erythema multiforme (EM). IM is a characteristic skin rash that resembles the target ring-shaped erythematous lesions most commonly seen in children and young adults suffering from recurrent herpes simplex infections. Vaccines can cause this characteristic dermatosis, which is most likely an immunogenic phenomenon for viral antigens. Note that they are also given covid-19 vaccines [5]. Another common side effect that was investigated in a March 2020 study by the American Academy of Dermatologists and the International League of dermatological societies is urticaria. Both acute Yankee urticaria and outbreaks of pre-chronic spontaneous Yankee urticaria often occur within the first week after the first or second dose of the COVID-19 vaccine. this reaction may result from increased susceptibility to mast cell degranulation in some people. Potential causes include an atopic background, latent chronic infections (such as Helicobacter pylori), and insensitivity to medications. Antihistamines may be recommended in these situations, as they are well tolerated and have few side effects. In most guest patients, urticaria is a very stressful but self-limiting condition that does not require further diagnostic examination [6].

Conclusions. Covid-19 vaccines can cause multiple delayed Skin Adverse reactions, both new and in the form of an outbreak of pre-existing dermatosis. Etiopathological triggers include a large number of interferons, delayed hypersensitivity reactions to vaccine components, activation of tissue-based memory T cells in susceptible individuals, and vaccine-induced extracellular matrix damage. In addition, some vaccine-side skin reactions (including vesicular/urticaria reactions or chills) can be considered as a natural imitation of SARS-coronavirus-2 infection, since the corresponding vaccine causes similar immunogenic mechanisms. More generally, vaccines can" awaken the sleeping dragon " from specific autoimmune reactions, including inflammatory skin reactions, in vulnerable patients. In light of the ongoing pandemic and the new features of SARS-CoV-2 variants, the potential side effects of COVID-19 vaccines should not interfere with the fight against the virus. However, awareness of rare side effects is essential for healthcare professionals.
References:


