

Case Report

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Pityriasiform Eruption Post COVID Vaccine

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Abstract

COVID 19 pandemic appeared in the end of 2019 and swept throughout the world at a raging speed. Multiple vaccines have been rolled out to curb the spread of disease. We report a case of 43-year male whole developed a generalised eruption with a pityriasiform reaction on histology. The rash resolved with symptomatic treatment.

Key Words: COVID 19, vaccine, Sinopharm, Pityriasiform

Introduction

More than a year after the first case of COVID 19 pandemic infection was first reported from the Wuhan district of China, infecting millions and killing more than 500,000 people, vaccines for one of the deadliest pandemics of the current millennia have finally been rolled out to be used for the general public. Although these vaccines are very safe to be used, minor adverse events are still a possibility, and we are reporting one such case of the same.

Case Report

A 43-year-old Emirati male presented with complaints of mildly itchy rashes on the body for 6 days. The lesions started on the trunk and rapidly progressed to involve all parts of the body,

including the pubic region but excluding the face. There was no positive history for any triggering factors except that the patient had taken his second dose of COVID 19 vaccine about 3 weeks before the onset of lesions. The patient had taken 2 doses of the Sinopharm vaccine (currently registered in United Arab Emirates for COVID 19) at an interval of 3 weeks between the doses.

On examination, he had multiple erythematous discrete papules, few of them coalescing to form plaques, present on the whole trunk including the pubic region, upper and lower limbs [Figure 1] (more on the upper limbs including the palms and favouring the extensor surface), with few of them having a central necrosis giving a targetoid appearance.



Figure 1: Lichenoid eruption

[Figure 2] Patient was investigated and biopsies were taken from both lesional and perilesional skin (for direct immunofluorescence). The patient was started on valaciclovir treatment, but the lesions continued to progress for the next 5 days. Topical mometasone was then added to his treatment and continued on valaciclovir. Over the next two weeks, his lesions had begun to resolve with hypopigmentation and some of them had begun to flatten and desquamate. All of the patient's routine laboratory work-up came out to be normal except for positive IgG serology for Herpes simplex Type 1.



Figure 2: Close up view showing few targetoid lesions

Histopathology of the patient showed pityriasiform reaction with thin band of orthokeratotic hyperkeratosis immediately above the granular cell layer, with overlying normal basket weave keratin and very focal exocytosis and spongiosis overlying a mild superficial perivascular lymphocytic infiltrate, without vasculitis or eosinophilia. [Figure 3]

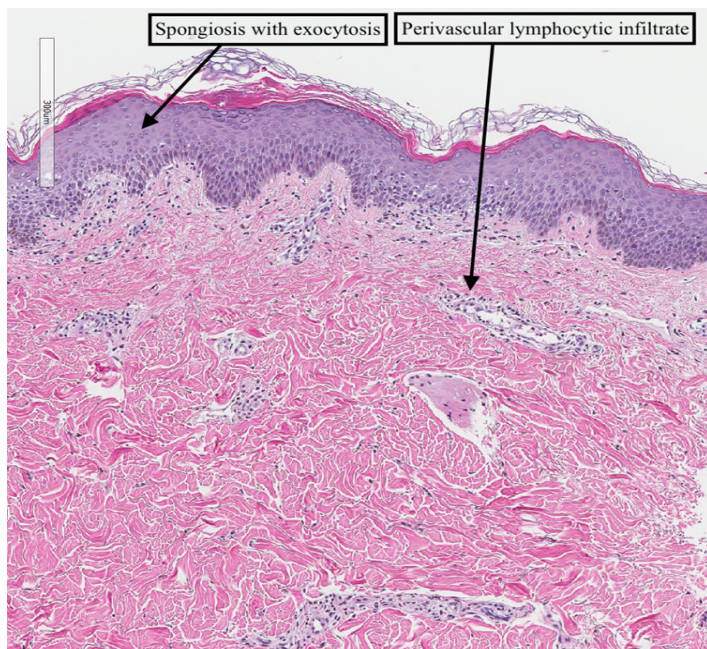


Figure 3: Biopsy (8x) showing pityriasiform changes

Discussion

Novel Coronavirus (2019-nCoV) first emerged in the Wuhan region of China in December 2019. It was initially named the 2019-nCoV and was later renamed as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) [1], and the disease it causes is known as Coronavirus Disease-2019 (COVID 19). SARS-Cov-2 belongs to the family of Coronaviridae viruses which are RNA viruses. The same group of viruses are also responsible for Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS). Both SARS and MERS are believed to have originated in bats and although still not confirmed, SARS-Cov-2 is also believed to be of bat origin [2].

The current vaccine currently being administered in United Arab Emirates (UAE) has been produced by Beijing Institute of Biological Products Limited or Sinopharm and has been given an emergency approval status for public use in UAE. The strain is made by inoculating vero cells with a new type of coronavirus strain and is known as the SARS-CoV-2 Vaccine (Vero Cell) and is an inactivated vaccine. 0.5 mL (containing 4 micro gram of inactivated novel corona virus protein) of this vaccine is injected in the deltoid region of the arm as 2 doses with an interval of 2-4 weeks between the doses [3].

The adverse reactions reported so far with this vaccine during the trials and post-trial use are mild flu like symptoms and injections site reactions. Other much less common adverse reactions are an allergic rash occurring within 72 hours of the vaccine with a possibility of anaphylaxis. The patient discussed here presented with an atypical rash having a mixed lichenoid and targetoid (erythema multiforme like) clinical appearance but a pityriasiform histopathological reaction. The lesions appeared about 3 weeks after the second dose and were only mildly pruritic, thus ruling the possibility of an allergic reaction. No initial response to oral valaciclovir also directs away from the possibility of herpes simplex as a trigger for the cutaneous eruption in this patient.

Considering the chronological association of the eruption with the COVID 19 vaccine and effectively ruling out any other likely possible trigger, it was deduced that this current eruption was likely triggered by COVID 19 vaccine. Despite a thorough search of the literature, which is sparse and limited till date, we were unable to cite any such cutaneous eruption in response to COVID 19 vaccines till date. Although a non-serious adverse reaction, physicians (in particular dermatologists) need to be watchful of such cutaneous eruptions happening in the post vaccine time-period, particularly in the first 4-6 weeks of the administration. A thorough history is required to establish the aetiological relationship. A new onset eruption happening for the first time in a patient in post vaccine time period (especially in the current scenario of active immunisation with COVID 19 vaccine) should prompt suspicion towards a vaccine related immunological or inflammatory cutaneous reaction. Also, it is imperative that patients presenting with such eruptions are adequately counselled, that these eruptions are minor (after meticulously examining and investigating), and to diffuse any vaccine related fear in such patients.

Références

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2. Keni R, Alexander A, Nayak PG, Mudgal J, Nandakumar K, et al. (2020) COVID-19: Emergence, Spread, Possible Treatments, and Global Burden. *Front. Public Health* 8: 216.
3. CNBG SARS COV-2 Vaccine [package insert].

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