«Διαχείρηση των αυτοανόσων στην εποχή της Covid-19 »

«Έξαρση της ψωριασικής νόσου μετά από εμβολιαμό για COVID: μύθος ή πραγματικότητα;»

Μαρίνα Παπουτσάκη MD, PhD
Δερματολόγος-Αφροδισιολόγος

Διευθύντρια ΕΣΥ
Α΄ Κλινική Αφροδισίων και Δερματικών Νόσων Ε.Κ.Π.Α.,
Νοσοκομείο Αφροδισίων και Δερματικών Νόσων, «Ανδρέας Συγγρός»

Δήλωση σύγκρουσης συμφερόντων

- **Έχω λάβει αμοιβή για ομιλίες και συμβουλευτικές δραστηριότητες από :**

Janssen, LEO, MSD, Genesis pharma, Pfizer, Novartis, Abbvie, UCB, Lilly

- **Ερευνήτρια σε κλινικές μελέτες για:**

Janssen, Pfizer, Novartis, Abbvie, LEO

Covid-19 και αρχικοί προβληματισμοί

- Συσχέτιση των νοσημάτων αυτών με αυξημένη πιθανότητα μόλυνσης
- Βαρύτερη κλινική εικόνα
- Επιρροή των βιολογικών θεραπειών στην πιθανότητα νόσησης ή/και στην πρόγνωση

Εμβολιασμός κατά της Covid-19

International Psoriasis Counsil- Εμβολιασμοί

The International Psoriasis Council (IPC) advises physicians and other healthcare practitioners to take into account the following:

1. **The principal considerations for SARS-CoV-2 vaccines are the same as for any vaccine:** Avoid live-attenuated vaccines if receiving an immunosuppressive/immunomodulatory medication and be aware that the effectiveness of vaccination may be attenuated in people taking drugs that affect the immune system.
2. *Currently the three vaccines closest to use at a population level are either RNA-based (Pfizer/BioNTech, Moderna) or based on replication deficient virus (Oxford/AstraZeneca*). **Thus, they are not live attenuated vaccines.**
3. We anticipate that most patients with psoriasis who do not have a contraindication or a known allergy to a vaccine component will be recommended to receive one of these SARS-CoV-2 vaccines as soon as possible based on local availability and guidance from local public health bodies.
4. Trials to date have not included people taking drugs that affect the immune system and thus the effects of the vaccines in this specific population will need to be established.
5. Many people with psoriasis have raised concerns about potential adverse effects of vaccines on their skin disease. However, there is no evidence that vaccines affect psoriasis onset or severity. **Registry data should be collected to inform whether SARS-Cov-2 vaccines either positively or negatively affect psoriasis outcomes**.
6. It is important that all people with psoriasis have access to adequate care. This includes access to SARS-CoV-2 vaccines.

Table I. NPF COVID-19 TF guidance for management of psoriatic disease during the pandemic: Version 2

Guidance number	Guidance statement	Level of consensus
1.1	It is not known with certainty if having psoriatic disease meaningfully alters the risks of contracting SARS-CoV-2 (the virus that causes COVID-19 illness) or having a worse course of COVID-19 illness. Existing data, with some exceptions, generally suggest that patients with psoriasis and/or psoriatic arthritis have similar rates of SARS-CoV-2 infection and COVID-19 outcomes as the general population.	Moderate
1.2	The likelihood of poor outcomes from COVID-19 is driven by risk factors such as older age and comorbidities such as chronic heart, lung, or kidney disease and metabolic disorders such as diabetes and obesity. Patients with psoriatic disease are more prone to these comorbidities, particularly in those with more severe disease.	High
2.1	It is not known with certainty if treatments for psoriasis and/or psoriatic arthritis meaningfully alter the risks of contracting SARS-CoV-2 (the virus that causes COVID-19 illness) or having a worse course of COVID-19 illness. Existing data generally suggest that treatments for psoriasis and/or psoriatic arthritis do not meaningfully alter the risk of acquiring SARS-CoV-2 infection or having worse COVID-19 outcomes.	Moderate
2.2	It is recommended that patients who are not infected with SARS-CoV-2 continue their biologic or oral therapies for psoriasis and/or psoriatic arthritis in most cases. Shared decision making between clinician and patient is recommended to guide discussions about use of systemic therapies during the pandemic. (See guidance 2.5 for definition of *shared decision making*.)	High

Delphi process was conducted.

(J Am Acad Dermatol https://doi.org/10.1016/j.jaad.2020.12.058.)

4.4.	Patients with psoriatic disease should receive the seasonal inactivated (eg, killed) influenza vaccine. While this vaccine will not protect against SARS-CoV-2, influenza vaccine lowers the risk of infection from seasonal influenza, which is of special importance to individual and public health during the COVID-19 pandemic. Patients taking systemic medications for psoriasis or psoriatic arthritis should discuss the timing of influenza vaccination with respect to their systemic psoriatic medications with their health care provider in order to optimize the response to the influenza vaccine.	High
4.5	Patients with psoriatic disease who do not have contraindications to vaccination should receive an mRNA-based COVID-19 vaccine as soon as it becomes available to them based on federal, state, and local guidance. Systemic medications for psoriasis or psoriatic arthritis are not a contraindication to the mRNA-based COVID-19 vaccine. If vaccine supply is limited, the TF recommends following the CDC's prioritization guidelines for early vaccination for selected groups based on their comorbidities and work setting (https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations-process.html).	High
4.6	It is recommended that patients who are to receive an mRNA-based COVID-19 vaccine continue their biologic or oral therapies for psoriasis and/or psoriatic arthritis in most cases. Shared decision making between clinician and patient is recommended to guide discussions about use of systemic therapies during the pandemic. (See guidance 2.5 for definition of *shared decision making*.)	High
4.7	For patients with psoriatic disease deciding whether or not to participate in a COVID-19 therapeutic or vaccine clinical trial, the TF recommends that the decision should be made on a case-by-case basis with shared decision making among the patient, researcher, and provider.	High

REVIEW

COVID-19 vaccine safety and efficacy in patients with immune-mediated inflammatory disease: Review of available evidence

Sarah Wack, BS, Timothy Patton, DO, and Laura K. Ferris, MD, PhD
Pittsburgh, Pennsylvania

Dermatologists diagnose and treat many immune-mediated inflammatory diseases (IMID). Understanding the inherent immune dysregulation of these diseases as well as the additional disruption that comes as a result of IMID treatments has been important during the COVID-19 pandemic. With vaccines becoming widely available, dermatologists need to be familiar with the risks and benefits of vaccination in these patients, particularly those taking biologics, in order to have informed discussions with their patients. In this review, we present the current evidence related to COVID-19 vaccine safety and efficacy in patients with IMID and review existing recommendations for vaccination against SARS-CoV-2.

Given the current evidence, there is minimal concern that these patients are at any greater risk of harm from COVID-19 vaccination compared to healthy controls. For most, the benefit of avoiding severe COVID-19 through vaccination will outweigh the theoretical risk of these vaccines. A question that is still outstanding is whether patients on biologics will generate a sufficient immune response to the vaccine, which may be dependent on the specific biologic therapy and indication being treated. This underscores the importance of following patients with IMID after vaccination to determine the safety, efficacy, and duration of the vaccine in this population. (J Am Acad Dermatol 2021;85:1274-84.)

Table III. Current society recommendations regarding COVID-19 vaccination

Society	Recommendations
National Psoriasis Foundation[33]	• All patients with psoriasis should accept a vaccine as soon as it becomes available to them • Psoriasis and/or psoriatic arthritis are not contraindications to vaccination
International Psoriasis Council[34]	• No specific guidance regarding vaccination • Stated that registry data should be collected to inform whether SARS-CoV-2 vaccines either positively or negatively affect psoriasis outcome

CAPSULE SUMMARY

- Patients with immune-mediated inflammatory disease (IMID) may experience disease flares or have diminished immune responses after COVID-19 vaccination, particularly those receiving B-cell–depleting therapies.
- More research is necessary to determine how biologic therapies impact vaccine responses in patients with IMID and to develop strategies to optimize responses in this population.

(J Am Acad Dermatol 2021;85:1274-84.)

Κλινικό περιστατικό

ΔΗΜΟΓΡΑΦΙΚΑ

- Άρρεν
- Γεννηθείς: 1971 (51 ετών)
- Συνταξιούχος

ΣΩΜΑΤΟΜΕΤΡΙΚΑ ΣΤΟΙΧΕΙΑ-ΣΥΝΗΘΕΙΕΣ

- Ύψος: 172 εκ.
- Βάρος: 100 Kg
- BMI: 33,8
- Κάπνισμα: όχι
- Αλκοόλ: κοινωνική κατανάλωση

ΙΣΤΟΡΙΚΟ ΨΩΡΙΑΣΙΚΗΣ ΝΟΣΟΥ-ΕΙΔΙΚΕΣ ΕΝΤΟΠΙΣΕΙΣ

- 2004: Ψωρίαση κατά πλάκας
- Ψωρίαση τριχωτού κεφαλής
- Ψωρίαση γεννητικών οργάνων

ΣΥΝΝΟΣΗΡΟΤΗΤΕΣ

- Αρτηριακή Υπέρταση (2017)
- Αντικατάσταση αορτικής βαλβίδας (2017)
- Ανεύρυσμα αορτής
- Αγχώδη διαταραχή (2004)

ΦΑΡΜΑΚΕΥΤΙΚΗ ΑΓΩΓΗ

- Αλπραζολάμη (alprazolam) και Παροξετίνη (paroxetine)
- Ραμιπριλάτη (ramiprilat)
- Μετοπρολόλη (metoprolol)
- Ασενοκουμαρόλη (acenocoumarol)

BMI: Body Mass Index.

Κλινικό περιστατικό

ΠΡΟΗΓΟΥΜΕΝΕΣ ΘΕΡΑΠΕΙΕΣ

2004-2021

- Μεμονωμένες βλάβες σε τριχωτό της κεφαλής και γεννητική περιοχή
- Τοπικές αγωγές
- Ήπια νόσος
- Μεγάλες περίοδοι ελεύθερος νόσου

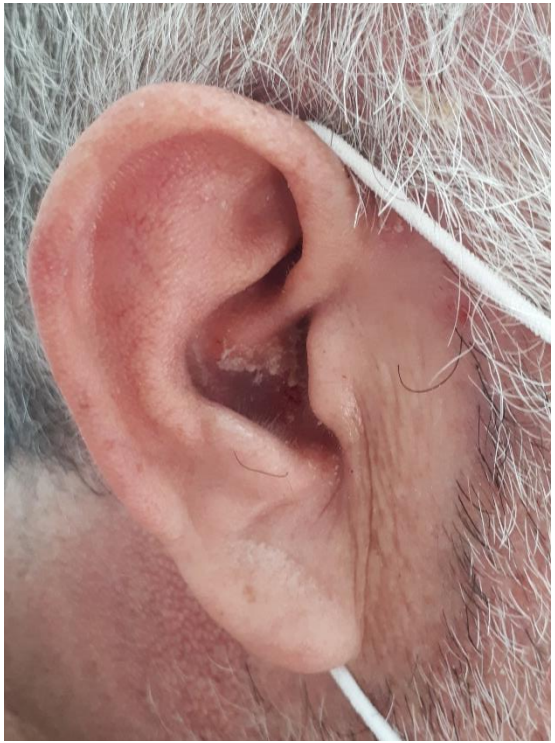
Δεκέμβριο 2021

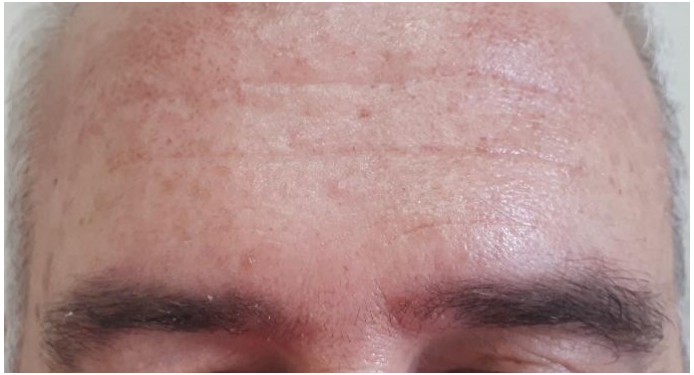
- Λαμβάνει την 2η δόση του εμβολίου της Pfizer κατά της Covid 19
- Από τότε αναφέρει σταδιακή επανεμφάνιση και επιδείνωση της νόσου

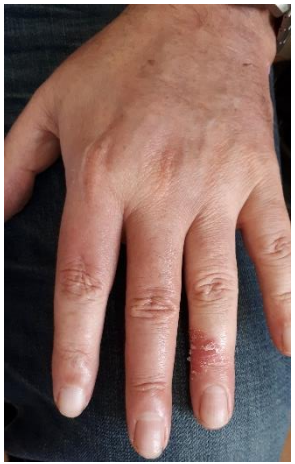
Μάιος 2022

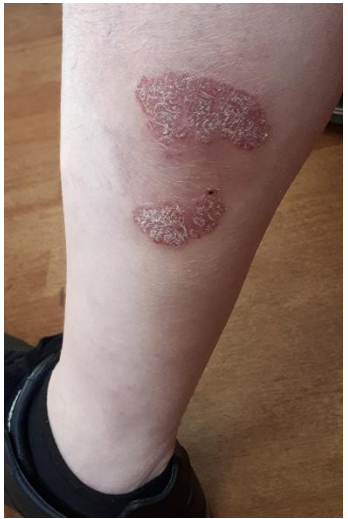
- Περαιτέρω έξαρση ψωριασικής νόσου
- PASI 12, PGA 3
- Έναρξη αγωγής με φουμαρικό οξύ με πολύ καλή ανταπόκριση

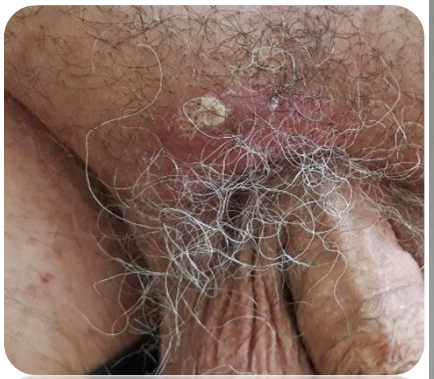
Κλινικό περιστατικό

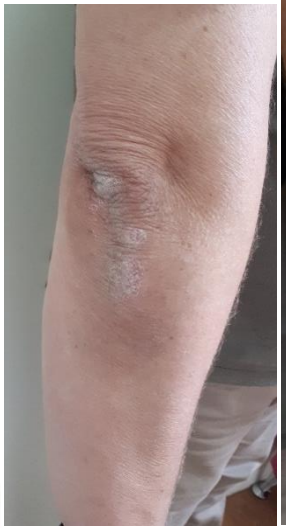


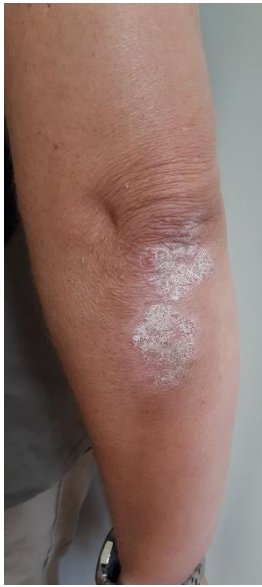




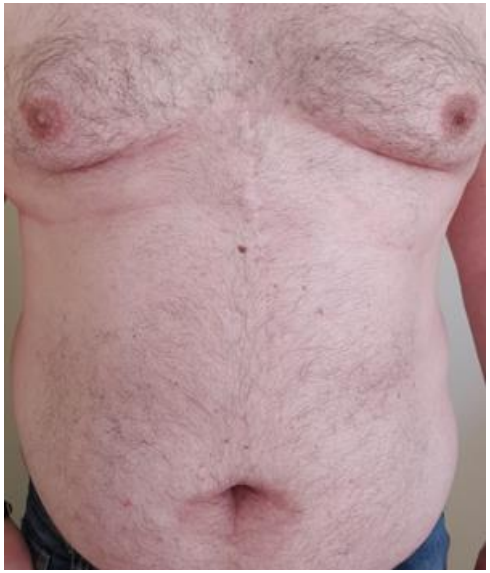


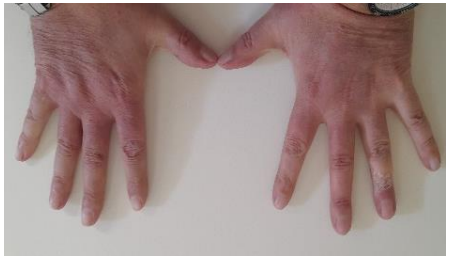


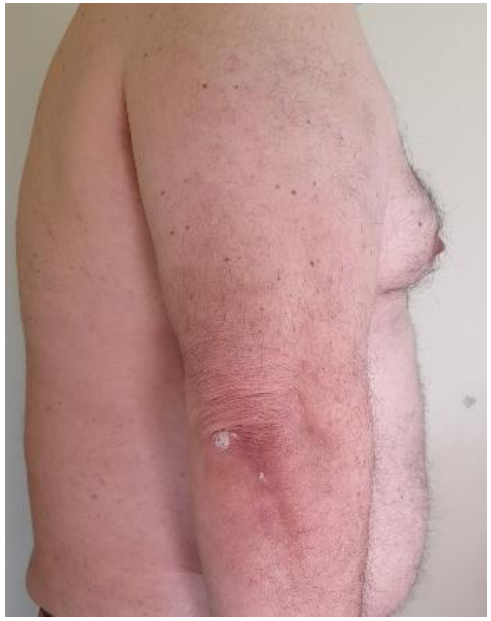


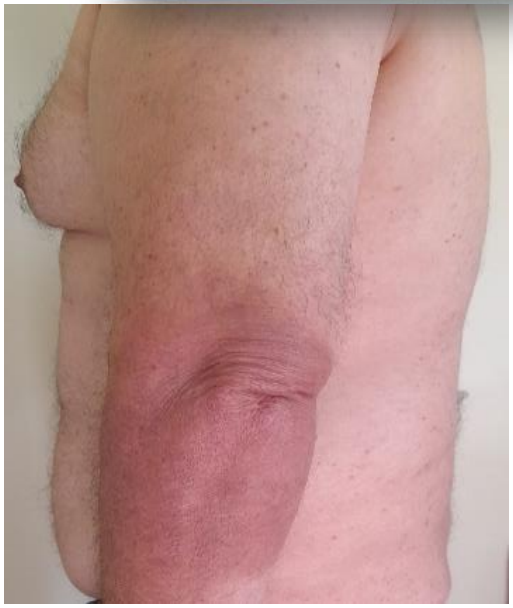


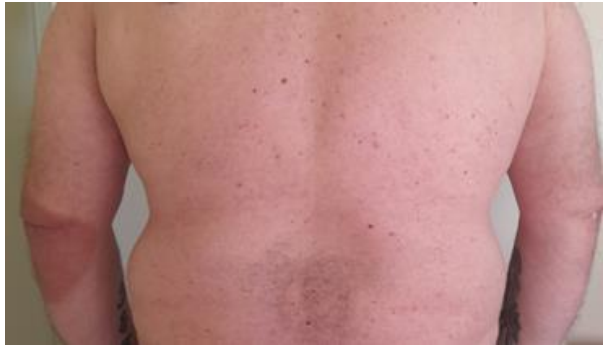
Κλινικό περιστατικό











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DOI: 10.1111/dth.15590

SHORT REPORT

DERMATOLOGIC THERAPY WILEY

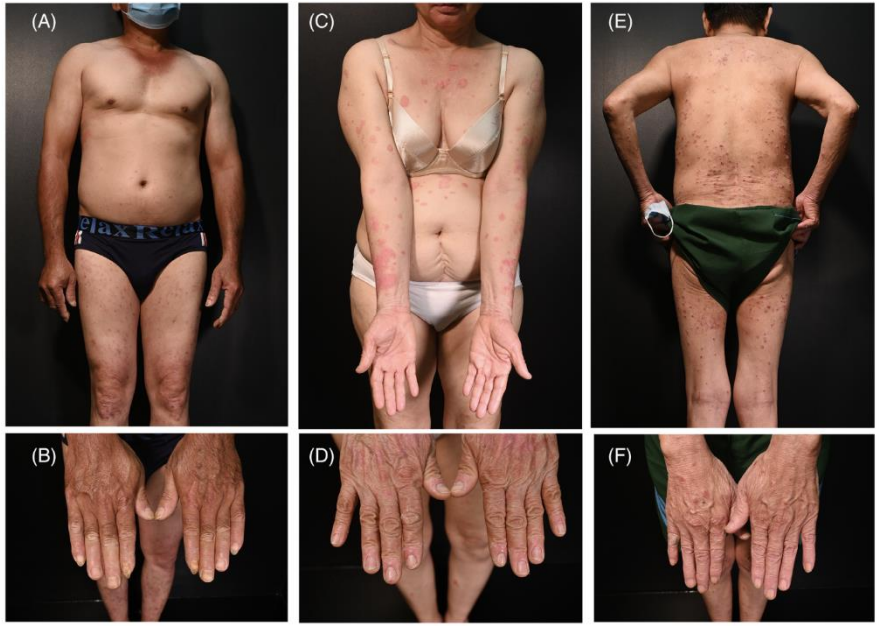
New onset of psoriasis following COVID-19 vaccination

Tu Nguyen Anh Tran | Thuy Thi Phan Nguyen | Nguyen Nhat Pham | Nhi Thi Uyen Pham | Thao Thi Phuong Vu | Hao Trong Nguyen

Abstract

The cutaneous side effects of COVID-19 vaccines are being studied and their immunogenicity is most likely linked to the pathophysiology of psoriasis. Although uncommon, several cases of exacerbation and new onset of psoriasis have been reported globally after vaccination. To contribute to the literature on this intriguing topic, we present three cases of de novo psoriasis in adult patients following COVID-19 vaccination. Our observations and a literature review show that this occurrence is independent of the type and brand of vaccines.

- Τρία περιστατικά «de novo» ψωρίασης



Psoriasis exacerbation after COVID-19 vaccination: a report of 14 cases from a single centre

Sotiriou et al. JEADV 2021

Table 1 Patient demographics, vaccination details and psoriasis flare details

	Sex	Age	Vacc	Dose	Days	PASI	Pstype	Nails	Treatment
1	F	69	AZ	2	8	10.2	Plaque	Yes	PUVA
2	F	82	Moderna	2	10	6.7	Plaque	No	Calcip/betam
3	F	62	Pfizer	2	6	5.4	Plaque	No	Calcip/betam
4	M	73	Pfizer	2	7	8.2	Plaque	No	Calcip/betam
5	M	66	AZ	1	22	14.4	Plaque	Yes	Risankizumab
6	F	62	AZ	2	13	12.4	Plaque	Yes	Apremilast
7	F	78	Pfizer	2	5	6.8	Plaque	No	Calcip/betam
8	F	64	AZ	2	6	11.2	Plaque	No	PUVA
9	M	69	AZ	1	32	9.2	Plaque	Yes	nbUVB
10	M	83	Pfizer	2	9	6.6	Plaque	No	Calcip/betam
11	F	61	AZ	2	3	5.9	Guttate	No	nbUVB
12	M	49	Pfizer	2	10	13.1	Plaque	Yes	Ixekizumab
13	F	55	Pfizer	2	7	10.2	Plaque	Yes	Cyclosporine
14	F	64	AZ	2	7	16.8	Plaque	No	Guselkumab

Table 1 Psoriasis flares after COVID-19 vaccin

	Sex	Age	Vaccine/dose	Days	PASI	Type of psoriasis flare	Previous treatment	New treatment
1	M	55	mRNABNT162b2 / 2	5	14.8	Plaque	None	Methotrexate
2	M	49	mRNABNT162b2 / 2	6	17.3	Plaque	None	Adalimumab
3	M	45	AZD1222 / 1	10	9.9	Plaque	Secukinumab	Secukinumab†
4	M	61	mRNABNT162b2 / 2	12	11.9	Plaque	Adalimumab	Ixekizumab
5	M	62	mRNA-1273 / 2	8	15.9	Plaque	None	Brodalumab
6	M	47	mRNABNT162b2 / 2	9	4.3	Guttate	Ixekizumab	Ixekizumab†
7	F	70	mRNABNT162b2 / 2	8	7.6	Plaque	Calcip/betam	Adalimumab
8	F	39	AZD1222 / 2	7	5.2	Plaque	Guselkumab	Guselkumab†
9	M	58	mRNABNT162b2 / 2	5	4.3	Plaque	Secukinumab	Secukinumab†
10	F	55	AZD1222 / 2	10	13.9	Plaque	Nb-UVB	Risankizumab
11	M	59	mRNABNT162b2 / 1	14	9.2	Plaque	Etanercept	Ixekizumab

- ✓ Η συστηματική αγωγή μειώνει τον κίνδυνο έξαρσης της ψωρίασης μετά τον εμβολιασμό κατά της covid-19
- ✓ Η τοπική αγωγή δεν δύναται να αποτρέψει την έξαρση
- ✓ Η αγωγή με βιολογικούς παράγοντες μειώνει σημαντικά τον κίνδυνο έξαρσης της ψωρίασης μετά τον εμβολιασμό

Megna et al. JEADV 2021

✓ Αναζωπύρωση δερματοπαθειών

Journal of Clinical Medicine

MDPI

Review

Cutaneous Adverse Reactions Associated with SARS-CoV-2 Vaccines

Francesco Bellinato *, Martina Maurelli, Paolo Gisondi and Giampiero Girolomoni

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* Correspondence: francesco.bellinato@univr.it

Table 2. Preexisting dermatoses flared by the SARS-CoV-2 vaccinations.

Type	Subtype	Reported Associated Vaccines
Immuno-mediated dermatoses	Chronic plaque psoriasis	Pfizer/BioNTech, Moderna, Johnson & Johnson/Janssen
	Atopic dermatitis	Pfizer/BioNTech, Moderna
	Lichen ruber planus	Pfizer/BioNTech, Moderna
	Chronic spontaneous urticaria	Moderna
	Bullous pemphigoid	Pfizer/BioNTech, Moderna
	Pemphigus vulgaris	Pfizer/BioNTech, Moderna
	Pityriasis rubra pilaris	AstraZeneca/Oxford
	Cutaneous small-vessel vasculitis	Pfizer/BioNTech
	Erythema multiforme	Pfizer/BioNTech
	Darier's disease	AstraZeneca/Oxford
	Systemic lupus erythematosus	AstraZeneca/Oxford
	Radiation recall phenomenon	Pfizer/BioNTech, AstraZeneca/Oxford
	BCG inflammation	Pfizer/BioNTech, Moderna
Infectious dermatoses	HSV reactivation VZV reactivation	All

BCG Bacillus Calmette–Guérin, HSV Herpes simplex virus, and VZV Varicella zoster virus.

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Contents lists available at ScienceDirect

Journal of Autoimmunity

journal homepage: www.elsevier.com/locate/jautimm

Autoimmune and autoinflammatory conditions after COVID-19 vaccination. New case reports and updated literature review

Yhojan Rodríguez [a,b,1], Manuel Rojas [b,1], Santiago Beltrán [b], Fernando Polo [c], Laura Camacho-Domínguez [b], Samuel David Morales [c], M. Eric Gershwin [d], Juan-Manuel Anaya [a,e,*]

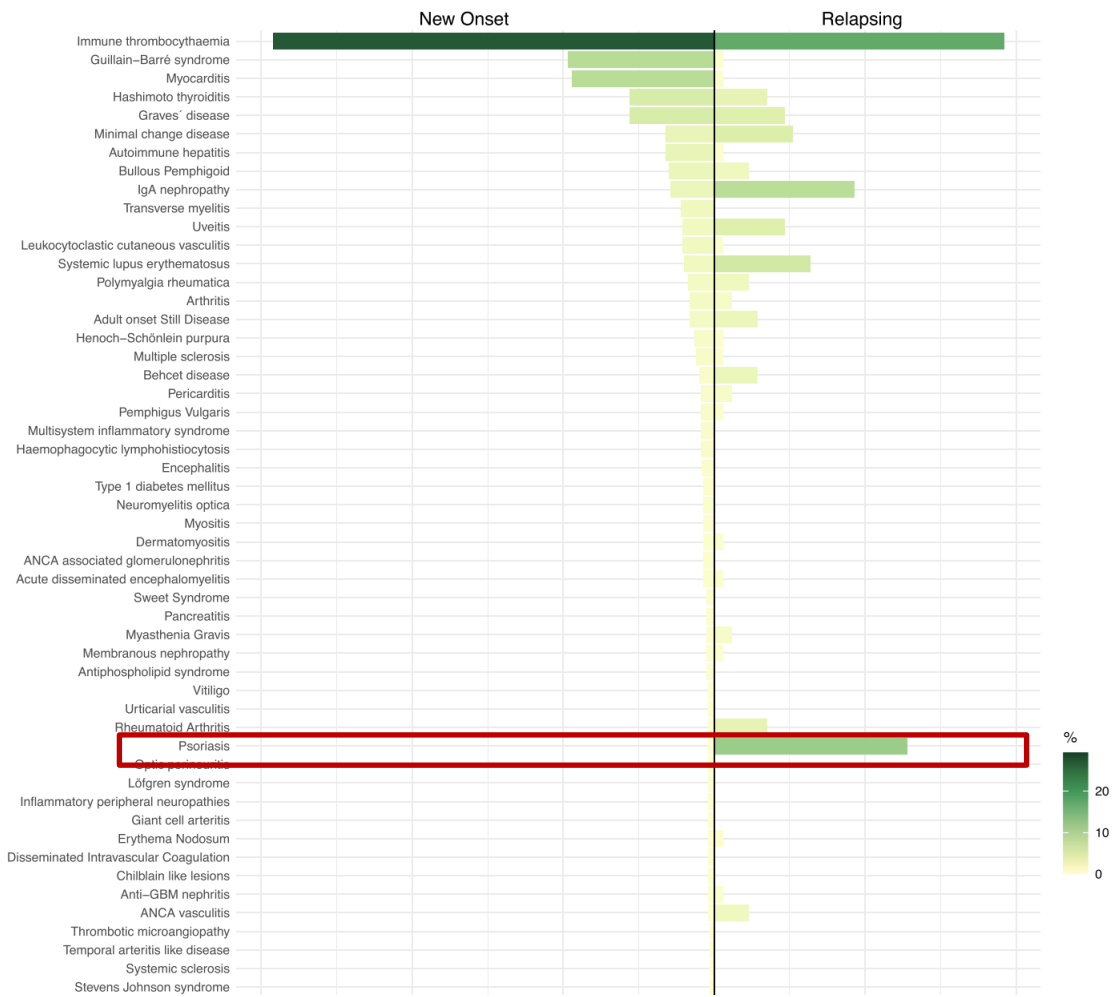
[a] Clínica del Occidente, Bogota, Colombia
[b] Center for Autoimmune Diseases Research (CREA), School of Medicine and Health Sciences, Universidad del Rosario, Bogota, Colombia
[c] Hospital Infantil de San José, Fundación Universitaria de Ciencias de la Salud. Department of Pathology, Bogota, Colombia
[d] Division of Rheumatology, Allergy and Clinical Immunology, University of California, Davis, Davis, CA, United States
[e] LifeFactors, Rionegro, Colombia

A B S T R A C T

Autoimmunity linked to COVID-19 immunization has been recorded throughout the pandemic. Herein we present six new patients who experienced relapses of previous autoimmune disease (AD) or developed a new autoimmune or autoinflammatory condition following vaccination. In addition, we documented additional cases through a systematic review of the literature up to August 1st, 2022, in which 464 studies (928 cases) were included. The majority of patients (53.6%) were women, with a median age of 48 years (IQR: 34 to 66). The median period between immunization and the start of symptoms was eight days (IQR: 3 to 14). New-onset conditions were observed in 81.5% (n: 756) of the cases. The most common diseases associated with new-onset events following vaccination were immune thrombocytopenia, myocarditis, and Guillain-Barré syndrome. In contrast, immune thrombocytopenia, psoriasis, IgA nephropathy, and systemic lupus erythematosus were the most common illnesses associated with relapsing episodes (18.5%, n: 172). The first dosage was linked with new-onset events (69.8% vs. 59.3%, P = 0.0100), whereas the second dose was related to relapsing disease (29.5% vs. 59.3%, P = 0.0159). New-onset conditions and relapsing diseases were more common in women (51.5% and 62.9%, respectively; P = 0.0081). The groups were evenly balanced in age. No deaths were recorded after the disease relapsed, while 4.7% of patients with new-onset conditions died (P = 0.0013). In conclusion, there may be an association between COVID-19 vaccination and autoimmune and inflammatory diseases. Some ADs seem to be more common than others. Vaccines and SARS-CoV-2 may induce autoimmunity through similar mechanisms. Large, well-controlled studies are warranted to validate this relationship and assess additional variables such as genetic and other environmental factors.

- ✓ **Η νέα εμφάνιση νοσημάτων παρατηρήθηκε στο 85% των περιπτώσεων**
- ✓ **Η εμφάνιση της ψωρίασης συσχετίστηκε πιο συχνά με επεισόδια υποτροπής της νόσου (18,5%)**
- ✓ **Η 1η δόση σχετίζεται περισσότερο με νέα εμφάνιση ενώ η 2η με υποτροπή της νόσου**

Fig. 5. Distribution of reported cases by country, according to new onset (red) and relapsing (blue) of the autoimmune/inflammatory disease.


New Onset
Relapsing
Immune thrombocythaemia
Guillain–Barré syndrome
Myocarditis
Hashimoto thyroiditis
Graves´ disease
Minimal change disease
Autoimmune hepatitis
Bullous Pemphigoid
IgA nephropathy
Transverse myelitis
Uveitis
Leukocytoclastic cutaneous vasculitis
Systemic lupus erythematosus
Polymyalgia rheumatica
Arthritis
Adult onset Still Disease
Henoch–Schönlein purpura
Multiple sclerosis
Behcet disease
Pericarditis
Pemphigus Vulgaris
Multisystem inflammatory syndrome
Haemophagocytic lymphohistiocytosis
Encephalitis
Type 1 diabetes mellitus
Neuromyelitis optica
Myositis
Dermatomyositis
ANCA associated glomerulonephritis
Acute disseminated encephalomyelitis
Sweet Syndrome
Pancreatitis
Myasthenia Gravis
Membranous nephropathy
Antiphospholipid syndrome
Vitiligo
Urticarial vasculitis
Rheumatoid Arthritis
Psoriasis
Löfgren syndrome
Inflammatory peripheral neuropathies
Giant cell arteritis
Erythema Nodosum
Disseminated Intravascular Coagulation
Chilblain like lesions
Anti–GBM nephritis
ANCA vasculitis
Thrombotic microangiopathy
Temporal arteritis like disease
Systemic sclerosis
Stevens Johnson syndrome
%
20
10
0

American Journal of Clinical Dermatology (2022) 23:775–799
https://doi.org/10.1007/s40257-022-00721-z

SYSTEMATIC REVIEW

New Onset and Exacerbations of Psoriasis Following COVID-19 Vaccines: A Systematic Review

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Abstract

Background Vaccination has been promoted to control viral transmission in response to the coronavirus disease 2019 (COVID-19) pandemic. Cases of new-onset or exacerbation of psoriasis, an immune-mediated inflammatory disease, were reported following COVID-19 vaccination. However, a comprehensive review examining the association between COVID-19 vaccination and the occurrence or exacerbation of psoriasis has yet to be performed.

Objective The aim of this systematic review is to investigate the demographics, clinical variables, and outcomes associated with psoriasis following COVID-19 vaccination.

Methods A systematic literature search was conducted using the PubMed, Embase, Web of Science, and Cochrane databases from database inception to April 25, 2022. The review included studies with relevant terms, including 'psoriasis,' 'psoriasis vulgaris,' 'guttate psoriasis,' 'pustular psoriasis,' 'palmoplantar pustulosis,' 'psoriatic erythroderma,' 'psoriatic arthritis,' 'COVID-19,' and 'vaccine.' We included all studies reporting at least one patient who developed new-onset psoriasis or experienced a psoriasis flare following at least one dose of any COVID-19 vaccine. A flare was defined as the worsening of disease conditions after vaccination according to the study by Gregoire et al. The appraisal tool described by Murad et al. was used to assess the quality of case reports and series, whereas the National Institute of Health quality assessment tool was used to assess observational studies.

Results The initial search yielded 367 results, including 7 studies reporting new-onset psoriasis, 32 studies reporting psoriasis flares, and 4 studies reporting both. The most commonly observed psoriasis subtype was plaque-type psoriasis. mRNA vaccines, including those produced by Moderna and BioNTech/Pfizer, were frequently associated with subsequent psoriasis episodes. First, second, and third vaccine doses were associated with psoriasis incidents, with the second dose most frequently associated with psoriasis flares. Delayed onset was observed, ranging from 2 to 21 days in the new-onset group and from 1 to 90 days in the flare group. Most patients experienced favorable outcomes, with improvement or resolution occurring within 3 days to 4 months.

Conclusions Both new-onset psoriasis and psoriasis flares were reported as cutaneous adverse events following COVID-19 vaccination. Psoriatic patients may require regular follow-up before and after COVID-19 vaccination.

Trial Registration Review registration number PROSPERO database: CRD42022304157.

Key Points

This systematic review identified all COVID-19 vaccines associated with psoriasis onset, with mRNA vaccines, including those produced by Moderna and BioNTech/Pfizer, frequently associated with subsequent psoriasis episodes.

First, second, and third vaccine doses were reported to induce psoriasis, with the second dose most commonly associated with psoriasis flares.

Delayed onset was observed, ranging from 2 to 21 days in the new-onset group and from 1 to 90 days in the flare group.

Both new-onset psoriasis and psoriasis flares are possible cutaneous adverse events following COVID-19 vaccination.

Review Article

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Vesiculobullous and Other Cutaneous Manifestations of COVID-19 Vaccines: a Scoping and Narrative Review

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Canadian Dermatology Association
Association canadienne de dermatologie

Abstract

As coronavirus disease (COVID-19) vaccines continue to be administered, dermatologists play a critical role in recognizing and treating the cutaneous manifestations (CM) associated with the vaccines. Adverse cutaneous reactions of COVID-19 vaccines reported in the literature range from common urticarial to rare vesiculobullous reactions. In this study, we performed a (1) scoping review to assess the occurrences of vesicular, papulovesicular, and bullous CMs of COVID-19 vaccines and their respective treatments, and (2) a narrative review discussing other common and uncommon CMs of COVID-19 vaccines. Thirty-six articles were included in the scoping review, and 66 articles in the narrative review. We found that vesicular, papulovesicular, and bullous lesions are infrequent, reported mostly after the first dose of Moderna or Pfizer vaccines. Eleven of the 36 studies reported vesicular reactions consistent with activation or reactivation of the herpes zoster virus. Most vesicular and bullous lesions were self-limited or treated with topical corticosteroids. Other CMs included injection-site, urticarial or morbilliform reactions, vasculitis, toxic epidermal necrolysis, and flaring of or new-onset skin diseases such as psoriasis. Treatments for CMs included topical or oral corticosteroids, antihistamines, or no treatment in self-limited cases. Although most CMs are benign and treatable, the data on the effect of systemic corticosteroids and immunosuppressive therapies on the immunogenicity of COVID-19 vaccines is limited. Some studies report reduced immunogenicity of the vaccines after high-dose corticosteroids use. Physicians may consult local guidelines where available when recommending COVID-19 vaccines to immunosuppressed patients, and when using corticosteroids to manage the CMs of COVID-19 vaccines.

Clinics in Dermatology (2021) 39, 966–984

ELSEVIER

Clinics in Dermatology

The histologic and molecular correlates of COVID-19 vaccine-induced changes in the skin

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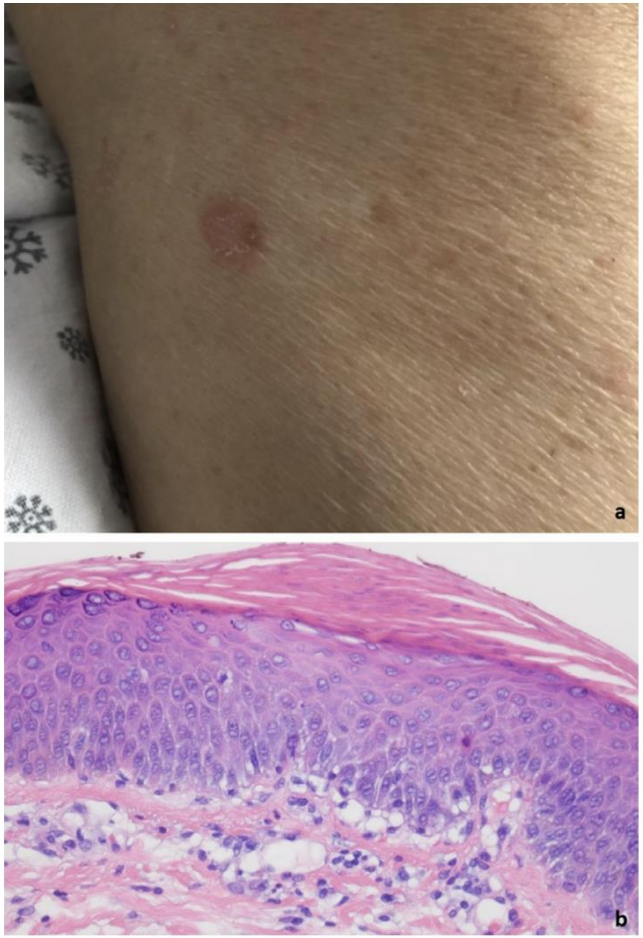
Abstract A total of 22 patients who had developed an adverse cutaneous reaction to the Moderna or Pfizer vaccine underwent biopsies. Each patient was assessed light microscopically, and, in select biopsies, spike glycoprotein and cytokine assessment were also conducted. The patients developed self-limited cutaneous reactions often described clinically as urticarial or eczematous within 1 day to 4 weeks after receiving the first or second dose of the Pfizer or Moderna vaccine. Classic clinical and morphologic depictions of type IV cutaneous hypersensitivity with features of eczematous dermatitis, interface dermatitis, granulomatous inflammation, and/or lymphocytic vasculitic component were observed. Clinical and/or histologic features of perniosis, pityriasis rosea, pityriasis rubra pilaris, and guttate psoriasis were seen in select cases. In 2 cases the dominant picture was urticarial vasculitis, possibly reflective of an Arthus type III immune complex action. The biopsy specimens of normal skin post vaccine and of skin affected by the post-vaccine eruption showed rare deep microvessels positive for spike glycoprotein with no complement deposition contrasting with greater vascular deposition of spike protein and complement in skin biopsies from patients experiencing severe coronavirus disease 2019 (COVID-19). It is concluded that self-limited hypersensitivity reactions to the vaccine occur possibly owing to a substance found in the vaccine vehicle (eg, polyethylene glycol). An immune response that is directed against human-manufactured spike has to be considered because some of the reactions clinically and or histologically closely resemble mild COVID-19. Finally, vaccine-associated immune enhancement largely attributable to the adjuvant properties of the vaccine may unmask certain inflammatory milieus operational in psoriasis, atopic dermatitis, and subclinical hypersensitivity.



Clinics in Dermatology (2021) 39, 966–984

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The histologic and molecular correlates of COVID-19 vaccine-induced changes in the skin

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Fig. 10 **(A)** The patient (case 17) developed a generalized guttate eruption shortly after receiving the second dose of the Pfizer vaccine on March 30, 2021 (reproduced with permission from Dr. JeanYoung Kim, New York, NY). The eruption occurred roughly 2 weeks later. The biopsy demonstrated focal areas of lenticular-shaped parakeratosis with subjacent granular cell layer loss. Very focally the capillaries within the dermal papillae are juxtaposed to the basal layer of the epidermis. **(B)** The findings suggest eruptive guttate psoriasis temporally associated with the COVID-19 vaccine (hematoxylin and eosin, 400 ×). COVID-19, coronavirus disease 2019.

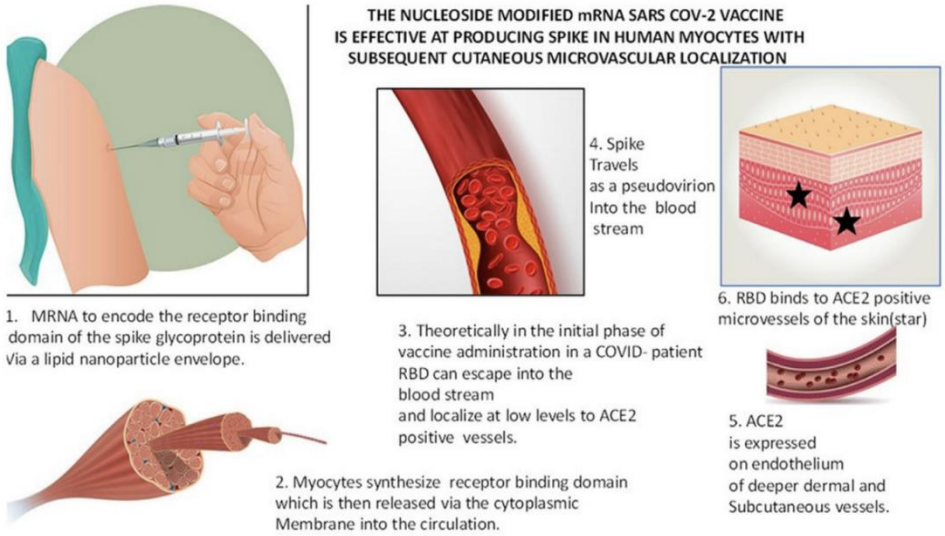

Fig. 18 The nucleoside modified mRNA severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) vaccine is effective at producing spike protein in human myocytes with subsequent cutaneous microvascular localization.
1. The mRNA to encode spike protein is delivered via a lipid nanoparticle envelope.
2. Myocytes synthesize spike protein, which is then released into the circulation.
3. Spike travels as a pseudovirion into the bloodstream.
4. Angiotensin converting enzyme 2 (ACE2) on endothelium of deeper dermal/subcutaneous vessels (red chromagen highlighting ACE2 positive vessels, *blue arrow*).
5. Spike binds to the ACE2-positive microvessels of the skin (red chromagen highlighting spike in endothelium, *blue arrow*). In the initial phase of vaccine administration spike protein can escape into the blood stream and localize at low levels to ACE2 positive vessels.

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SHORT REPORT

DERMATOLOGIC THERAPY WILEY

New onset of psoriasis following COVID-19 vaccination

Tu Nguyen Anh Tran | Thuy Thi Phan Nguyen | Nguyen Nhat Pham | Nhi Thi Uyen Pham | Thao Thi Phuong Vu | Hao Trong Nguyen

TABLE 1 Case studies of de novo psoriasis following COVID-19 vaccination in literature

Authors	Number of patient(s)[a]	Gender of patient(s)	Age of patient(s)	Vaccine regimen	Day(s) of onset	Psoriasis subtype(s)	Severity	History of COVID-19	Treatment(s) (response)
Wei et al.[3]	1	Male	89	First dose: mRNA-1273 Second dose: mRNA-1273	24 after second dose	N/A	60% BSA affected	No	Ixekizumab acitretin 25 mg (resolved)
Lehmann et al.[7]	1	Female	79	First dose: BNT162b2	10 after first dose	(mainly) guttate	N/A possibly mild	N/A	calcipotriol/betamethasone ointment + UVB (N/A)
Song et al.[8]	1	Female	23	First dose: BNT162b2	Two after first dose	Guttate	N/A; possibly mild	N/A	Topical calcipotriol/betamethasone (significantly improved)
Nagrani et al.[9]	1	Male	65	First dose: AZD1222[b] Second dose: AZD1222	10 after second dose	Plaque	30% BSA	N/A	Apremilast, antihistamines and emollients (well-responsed)
Elamin et al.[10]	1	Female	66	First dose: AZD1222[b]	21 after first dose	Pustular	Extensive, possibly moderate-to-severe	No	Topical steroid, Acitretin 20 mg qd (resolved)
Our case reports	3	Two males One female	51, 68, and 73	Three AZD1222 doses; one BNT162b2 dose; and mixed one dose of BNT162b2 after two doses of mRNA-1273	7 days after the first AZD1222; 30 days after the first BNT162b2 dose; 30 days after the third BNT162b2 dose in a mixed regimen	One guttate Two plaque	Mild	Yes: 1 No: 2	Topical calcipotriol/betamethasone antihistamines

[a]Included new-onset psoriasis only.
[b]Also known as ChAdOx1 nCoV-19.

Abstract

Despite the significant reduction of both morbidity and mortality after the introduction of many vaccines against COVID-19, recent reports indicated a worsening skin conditions in particular patients with psoriasis. We extracted the data of 51 patients from 19 papers. The mean age was 56.9 (SD = 16.2) years, with a male prevalence 45%. Of the 51 cases, vaccine types at which psoriasis flare occurred were as the following: Pfizer vaccine (30), AstraZeneca (9), Moderna (8), Coronavac (2) Covishield (1), and Covaxin (1). Exacerbation was common in the second dose of Pfizer, AstraZeneca, Moderna, and Covishield vaccines. Moreover, the onset of psoriasis exacerbation was shorter after the second dose of Pfizer (mean = 12.8 [SD = 15.2]) and AstraZeneca (mean = 7.4 [SD = 3.6]) rather than the first dose of both vaccines, respectively (mean = 19.2 [SD = 21.3]) and (mean = 18.5 [SD = 10.7]).

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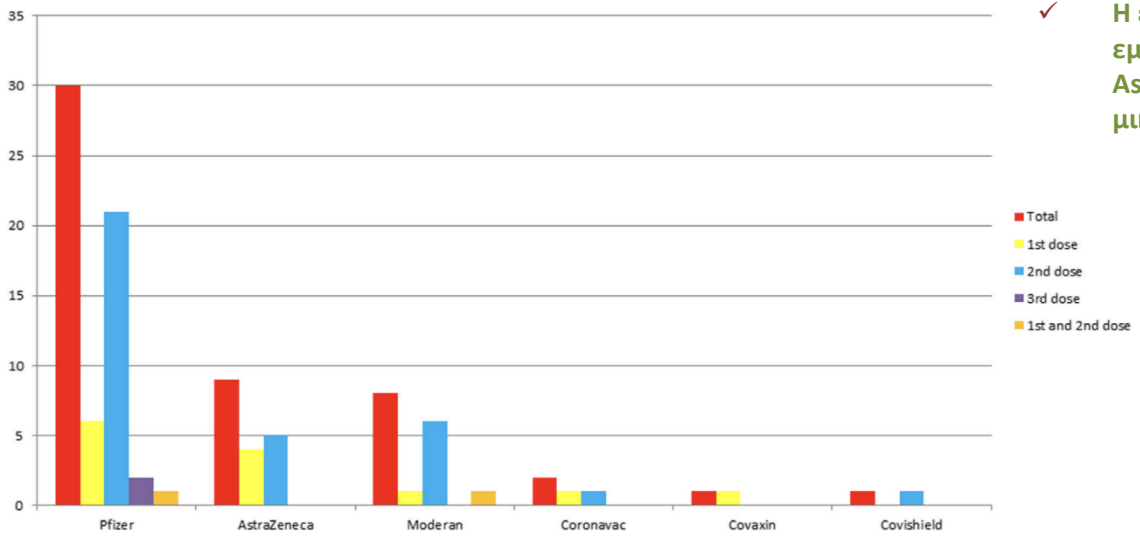
SHORT REPORT

DERMATOLOGIC THERAPY WILEY

Psoriasis exacerbation after COVID-19 vaccines: A brief report of the reported cases

Amr Ehab El-Qushayri[1] | Beatrice Nardone[2]



- ✓ Η έξαρση ήταν πιο συχνή μετά την δεύτερη δόση του εμβολίου για τα περισσότερα εμβόλια
- ✓ Η έξαρση μετά την 2η δόση των εμβολίων της Pfizer και της AstraZeneca παρατηρήθηκε σε μικρότερο διάστημα

Abstract: The introduction of biologic drugs revolutionized the treatment of psoriasis, shifting treatment goals to higher treatment outcomes and less frequent safety issues. The outbreak of Coronavirus disease 2019 (COVID-19) represented a worldwide challenge, strongly affecting lifestyle, global economy, and overall health. Among the strategies adopted to contain the spreading of the infection, vaccination is the main one. In this context, the introduction of COVID-19 vaccines raised several doubts about their effectiveness and safety in patients undergoing therapy with biological for psoriasis. Even if molecular and cellular mechanisms by which COVID-19 vaccines lead to psoriasis development have not yet been fully elucidated, vaccination itself can trigger the release of interleukin (IL)-6, interferon (IFN) and tumor necrosis factor (TNF) α by T-helper (Th)1/Th17 cells. All these cytokines are involved in psoriasis pathogenesis. Thus, the aim of this manuscript is to review current literature on the safety and effectiveness of COVID-19 vaccination in psoriasis patients undergoing treatment with biologics, in order to clarify any concerns.

Psoriasis: Targets and Therapy

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REVIEW

Safety and Efficacy of Covid-19 Vaccination in Patients Undergoing Biological Treatments for Psoriasis

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*These authors contributed equally to this work

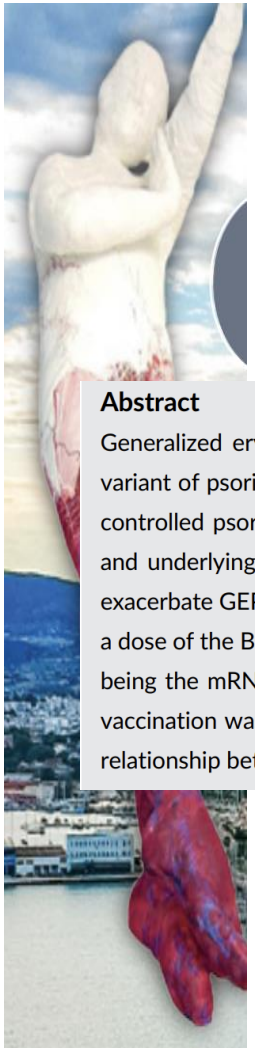
- Μοιάζει ότι ο εμβολιασμός κατά της COVID-19 από μόνος του μπορεί να οδηγήσει στην απελευθέρωση πολλαπλών κυτταροκινών μέσω των **T-helper (Th)1/Th17** όπως:

- ✓ IL-6
- ✓ INF
- ✓ Anti-TNFα

Table 1 Cases of Psoriasis Exacerbation Following COVID-19 Vaccination in Patients Undergoing Treatment with Biologics for Psoriasis

Authors	Patient	Sex	Vaccine/Dose	Days	Previous Treatment	New Treatment
Megna et al[56]	1	M	AZD1222 / 1	10	Secukinumab	Secukinumab*
	2	M	mRNABNT162b2 / 2	12	Adalimumab	Ixekizumab
	3	M	mRNABNT162b2 / 2	9	Ixekizumab	Ixekizumab*
	4	F	AZD1222 / 1	7	Guselkumab	Guselkumab*
	5	M	mRNABNT162b2 / 2	5	Secukinumab	Secukinumab*
	6	M	mRNABNT162b2 / 1	14	Etanercept	Ixekizumab
Koumaki et al[57]	1	F	mRNABNT162b2/2	10	Secukinumab	Secukinumab*
	2	F	mRNABNT162b2/2	2	Adalimumab	Adalimumab*
	3	F	mRNABNT162b2/1	20	Adalimumab	Oral Corticosteroids
	4	F	mRNABNT162b2/1,2	3	Secukinumab	Secukinumab
	5	F	mRNABNT162b2/1,2	7	Secukinumab	Secukinumab
	6	F	mRNABNT162b2/1	20	Ustekinumab	Ustekinumab*
Tsunoda et al[58]	1	M	mRNABNT162b2 / 2	3	Risankizumab	Risankizumab
Ruggiero et al[59]	1	M	mRNABNT162b2/2	16	Adalimumab	Brodalumab
	2	F	mRNABNT162b2/2	25	Secukinumab	Secukinumab*

Notes: AZD1222: AstraZeneca-Oxford AZD1222. mRNA-1273: Moderna mRNA-1273. mRNABNT162b2: Pfizer mRNABNT162b2. Dose: number of doses after which psoriasis flare occurred. *Biologic treatment associated with topical calcipotriol/betamethasone combination and/or phototherapy.
Abbreviations: M, male; F, female.



- Δύο περιστατικά ερυθροδερμικής ψωρίασης
- Μετά την 2η δόση mRNA εμβολίου

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SHORT REPORT

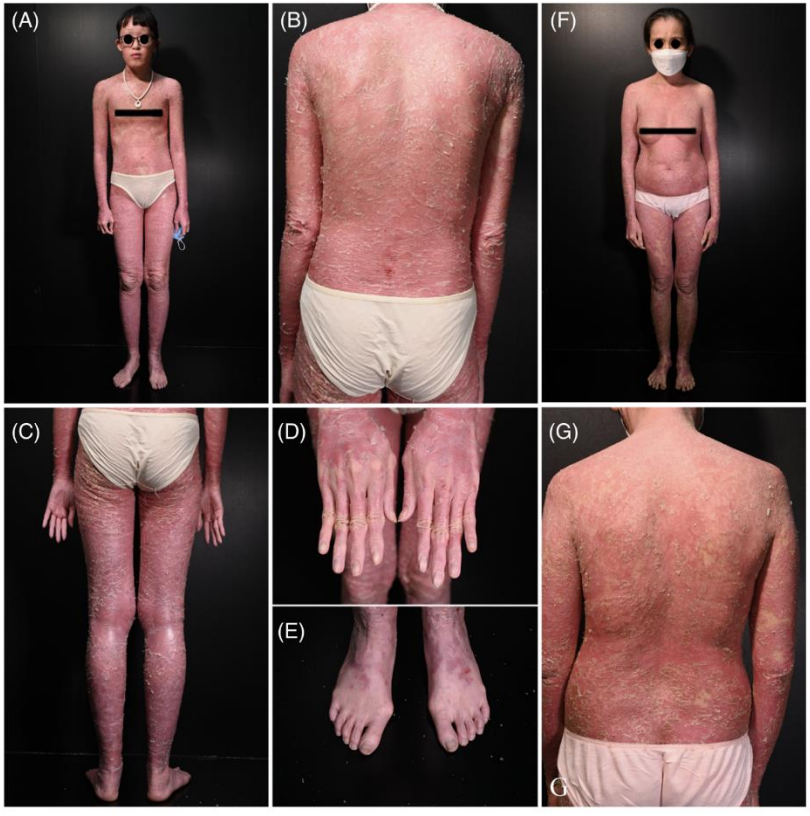
DERMATOLOGIC THERAPY WILEY

Generalized erythrodermic psoriasis triggered by vaccination against severe acute respiratory syndrome Coronavirus 2

Tong Ba Tran | Nhi Thi Uyen Pham | Huy Ngoc Phan | Hao Trong Nguyen

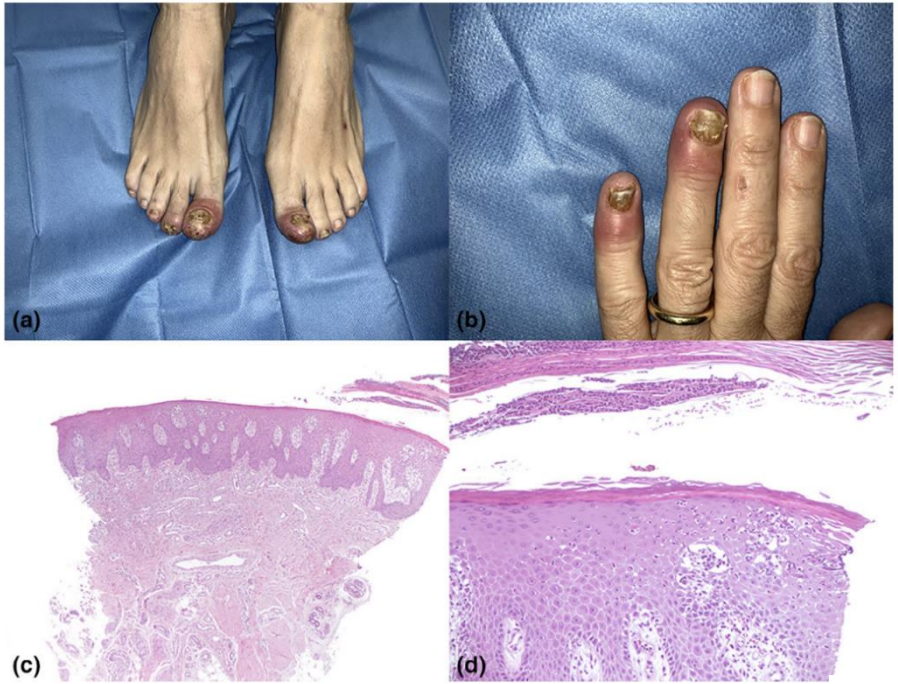
Abstract

Generalized erythrodermic psoriasis (GEP) is a rare and potentially life-threatening variant of psoriasis. Possible triggers that have been identified to date include poorly controlled psoriasis, medications, abrupt discontinuation of anti-psoriatic treatment, and underlying systemic illnesses. However, vaccines have rarely been reported to exacerbate GEP. Herein, we report two unique cases with GEP exacerbated following a dose of the BNT162b2 mRNA vaccine for COVID-19 (as their second dose, the first being the mRNA-1273 vaccine). Based on our observations and a literature review, vaccination was considered the most likely trigger of GEP due to the close temporal relationship between the second vaccination and the onset of GEP.



LETTER TO THE EDITOR

Nail psoriasis: a rare mRNA COVID-19 vaccine reaction



Introduction: Many patients with chronic inflammatory dermatosis such as psoriasis usually ask about the safety of COVID-19 vaccination and if it would affect the course of their disease. Indeed, many case reports, case series and clinical studies, reporting psoriasis exacerbation following vaccination against COVID-19, were published during the pandemic. Also, many questions arise regarding the existence of exacerbating factors of these flare ups, including environmental triggers such as the insufficiency of vitamin D levels.

Methods: This is a retrospective study that measures alterations in psoriasis activity and severity index (PASI) not exceeding 2 weeks after the first and second dose of COVID-19 vaccinations in the reported cases and assesses whether such changes have any association with patients' vitamin D levels. We retrospectively reviewed the case records of all patients with a documented flare up after COVID-19 vaccination in our department as well as those who did not, during a year.

Results: Among them, we found 40 psoriasis patients that had reported vitamin D levels in the form of 25-hydroxy-vitamin D within 3 weeks after vaccination, including 23 with exacerbation and 17 without exacerbation. Performing χ^2 and *t*-test controls for psoriasis patients with and without flare-ups, a statistically significant dependence emerged in the seasons of summer [$\chi^2(1) = 5.507$, $p = 0.019$], spring [$\chi^2(1) = 11.429$, $p = 0.001$] and in the categories of vitamin D [$\chi^2(2) = 7.932$, $p = 0.019$], while the mean value of vitamin D for psoriasis patients who did not have exacerbation (31.14 ± 6.67 ng/mL) is statistically higher [$t(38) = 3.655$, $p = 0.001$] than the corresponding value of psoriasis patients who had an exacerbation (23.43 ± 6.49 ng/mL).

Discussion: This study indicates that psoriasis patients with insufficient (21–29 ng/mL) or inadequate (<20 ng/mL) levels of vitamin D are more prone to postvaccination aggravation of the disease while vaccination in summer, a period with the most extent photo-exposition, can be a protective factor.

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Serum vitamin D levels can be predictive of psoriasis flares up after COVID-19 vaccination: a retrospective case control study

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TABLE 1 The results of the chi-square and *t*-test analyses comparing psoriasis patients who experienced exacerbation after receiving COVID-19 vaccination to those who did not.

Variant	Psoriasis patients without exacerbation (57.5%, *N*=23)	Psoriasis patients with exacerbation (42.5%, *N*=17)	Statistics	*p*-value
Sex			$\chi^2(1) = 0.825$	0.364
Female	66.7% ($N = 10$)	33.3% ($N = 5$)		
Male	52.0% ($N = 13$)	48.0% ($N = 12$)		
Age	56 (±12.7)	58 (±14.2)	$t(38) = -0.468$	0.642
Season				
Summer	77.8% ($N = 14$)	22.2% ($N = 4$)	$\chi^2(1) = 5.507$	**0.019**
Spring	34.8% ($N = 8$)	65.2% ($N = 15$)	$\chi^2(1) = 11.429$	**0.001**
Winter	100% ($N = 1$)	0% ($N = 0$)	$\chi^2(1) = 0.758$	1.000+
Autumn	50% ($N = 1$)	50% ($N = 1$)	$\chi^2(1) = 0.048$	1.000+
Vitamin D levels	31.14 (±6.67)	23.43 (±6.49)	$t(38) = 3.655$	**0.001**
Vitamin D categories			$\chi^2(2) = 7.932$	**0.019**
Deficiency	28.6% ($N = 2$)	71.4% ($N = 5$)		
Insufficiency	43.8% ($N = 7$)	56.3% ($N = 9$)		
Sufficiency	82.4% ($N = 14$)	17.6% ($N = 3$)		

+Exact Fisher value.
p values < 0.05.

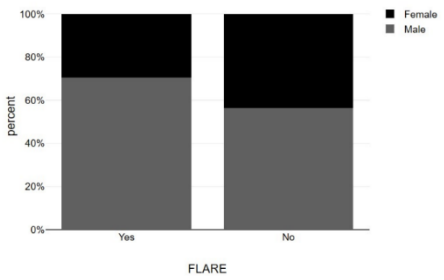


FIGURE 1
Bar graphs showing sex distribution among psoriasis patients with and without post-vaccination flare-up.

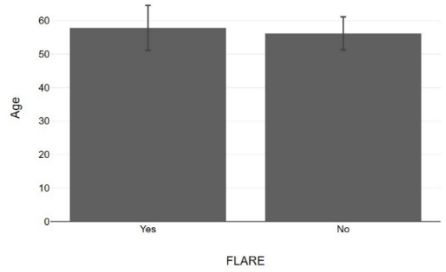


FIGURE 2
Bar graphs with 95% confidence interval showing age values between psoriasis patients with and without flare up.

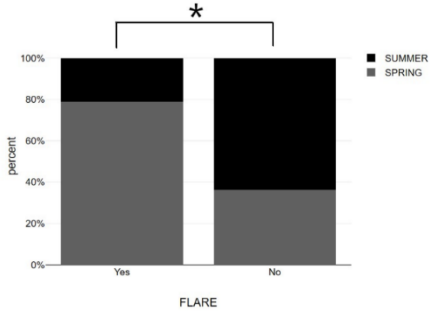


FIGURE 3
Bar graphs showing summer vs. spring distribution among psoriasis patients with and without post-vaccination flare-up. *p<0.05, significantly different compared to flare up group.

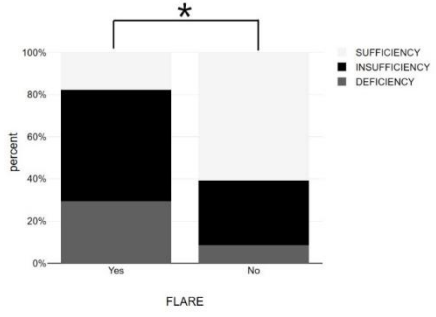


FIGURE 4
Bar graphs showing vitamin D status among psoriasis patients with and without post-vaccination flare-up. *p<0.05, significantly different compared to flare up group.

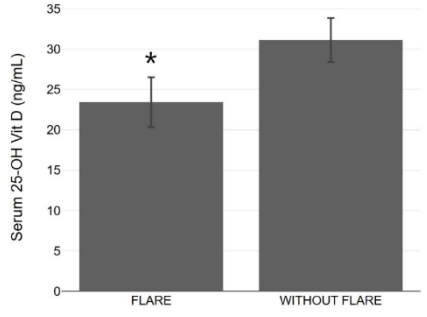


FIGURE 5
Bar graphs with 95% confidence interval showing serum 25-OH vitamin D between psoriasis patients with and without flare up. *p<0.05, significantly different compared to flare up group.

Συμπερασματικά

- ✓ Η «de novo» εμφάνιση ή η υποτροπή της ψωρίασης μετά τον εμβολιασμό κατά της COVID-19 περιγράφεται, αλλά δεν είναι συχνή
- ✓ Η εμφάνιση της ψωρίασης συσχετίστηκε πιο συχνά με επεισόδια υποτροπής της νόσου (18,5%)
- ✓ Η 1η δόση σχετίζεται περισσότερο με νέα εμφάνιση ενώ η 2η με υποτροπή της νόσου
- ✓ Η εμφάνιση ή η έξαρση των ψωριασικών βλαβών ήταν πιο συχνή μετά την δεύτερη δόση του εμβολίου για τα περισσότερα εμβόλια
- ✓ Η κλινική εικόνα συνήθως ήταν ήπια και καλά ελεγχόμενη ακόμα και με τοπική αγωγή μόνο
- ✓ Η συστηματική αγωγή μειώνει τον κίνδυνο έξαρσης της ψωρίασης μετά τον εμβολιασμό κατά της covid-19
- ✓ Η τοπική αγωγή δεν δύναται να αποτρέψει την έξαρση
- ✓ Η αγωγή με βιολογικούς παράγοντες μειώνει σημαντικά τον κίνδυνο έξαρσης της ψωρίασης μετά τον εμβολιασμό

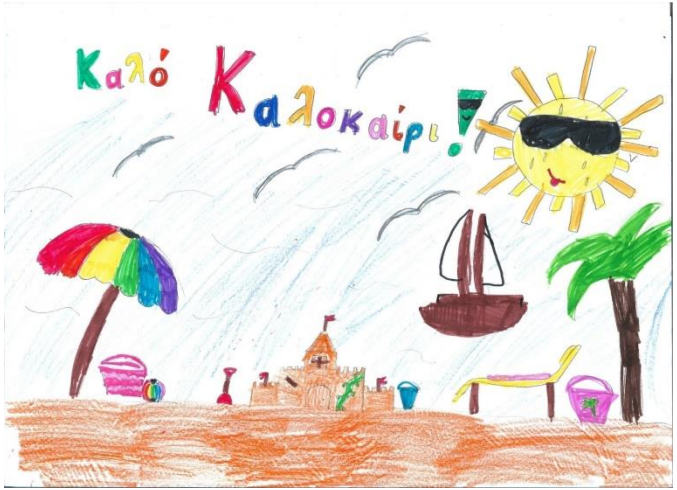
Συμπερασματικά

«Έξαρση της ψωριασικής νόσου μετά από εμβολιαμό για COVID: μύθος ή πραγματικότητα;»

Πραγματικότητα


ΞΑΠΛΩΣΤΡΕΣ
ΑΠΛΕΣ
5€
ΜΕ
ΑΛΕΞΙΚΕΡΑΥΝΟ
8€


Έλα Δω Ρεεε
Ιούνιο Έχουμε!!!!!!



Σας ευχαριστώ