



LETTER TO THE EDITOR

Post-vaccination skin lesions: bullous pemphigoid

Aşılama sonrası cilt lezyonları: büllöz pemfigoid

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To the Editor,

COVID-19 pandemic started in Wuhan in December 2019, spread to countries, and negatively affected world health^{1,2}. The only way to get rid of the pandemic was the widespread use of vaccines all over the world³. Vaccines were developed so quickly, there wasn't enough time to see all their side effects. Many articles have been published on the adverse effects of SARS-CoV-2 vaccines⁴. These side effects are swelling or redness at the injection site, fatigue, mild fever, chills, headache, muscle, and joint pain, vomiting and diarrhea⁵. CoronaVac® is an inactivated virus vaccine originating in China. Autoimmune diseases can be seen after inactivated virus vaccine applications⁶. Bullous pemphigoid is a life-threatening autoimmune disease that presents with blisters and erosions on the mucous membranes and skin. It occurs due to autoantibodies against adhesion molecules or structural proteins found in mucous membranes and skin⁷. Bullous pemphigoid cases developing after vaccination are encountered especially in childhood. Other causes of bullous pemphigoid include drugs, physical factors, infections, and organ transplantation. Diagnosis is made by immunofluorescence evaluation in the biopsy material. It is treated by corticosteroids topically or systemically.⁷ One of the cases we have experienced is as follows.

An 80-years-old male patient, vaccinated by inactive covid 19 vaccines (COVID-19 Vaccine (Vero Cell), Inactive - CoronaVac® No.39, SHANGDI West

Road. Haidian District, Beijing, P.R. China) 7 days later two bullous lesions formed on left forearm. The lesions increased over time. After the 2nd dose of covid 19 vaccine, he applied to the emergency service with the complaint of spreading to the whole body. He had a history of ischemic stroke, coronary artery disease and hypertension. He was using metoprolol, pantoprazole, inhaler ipratropium bromide, and fluticasone propionate. His fever was 37.5° C, oxygen saturation was 95%, heart rate was 94 beats/minute, and blood pressure was 180/95 mm/Hg. Physical examination of abdomen was within normal limits despite skin lesions. There were minimal rales at the bases in lung sounds.

There were extensive bullous lesions covering the whole body, especially black and empty bullae in places. According to laboratory results, white blood cell count was $10.3 \times 10^3/\mu\text{L}$, C-reactive protein level was 59 mg/dL, blood glucose level was 120 mg/dL, and blood electrolyte levels were normal. Biopsy was taken from the patient's lesions. The pathology results confirmed bullous pemphigoid. Topical and systematic medical treatment was applied during hospitalization. After thirty-two days hospitalization patient was discharged without any complication. Informed consent was obtained from the patient and his son to share the case on the scientific platform.

In conclusion, although rare, bullous pemphigoid are skin lesions that can be seen after vaccination.

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REFERENCES

1. Eroglu SE, Aksel G, Altunok I, Özdemir S, Algin A, HŞ Akça et al. Can Google® trends predict emergency department admissions in pandemic periods? *Medicine Science*. 2021;10:111-7.
2. Akça HŞ, Özdemir S, Tuncer Kara K. Evaluation of the presence of reinfection in patients presenting to the emergency department with COVID-19 symptoms after recovery. *J Exp Clin Med*. 2022;39:628-32.
3. Ferdinands JM, Rao S, Dixon BE, Mitchell PK, DeSilva MB, Irving SA et al. Waning 2-dose and 3-dose effectiveness of mRNA vaccines against COVID-19-associated emergency department and urgent care encounters and hospitalizations among adults during periods of delta and omicron variant predominance — VISION Network, 10 States, August 2021–January 2022. *MMWR Morb Mortal Wkly Rep*. 2022;71:255-63.
4. Esquivel-Valerio JA, Skinner-Taylor CM, Moreno-Arquieta IA, Cardenas-de la Garza JA, Garcia-Arellano G, Gonzalez-Garcia PL et al. Adverse events of six COVID-19 vaccines in patients with autoimmune rheumatic diseases: a cross-sectional study. *Rheumatol Int*. 2021;41:2105-8.
5. Rahman MdM, Masum MdHU, Wajed S, Talukder A. A comprehensive review on COVID-19 vaccines: development, effectiveness, adverse effects, distribution and challenges. *VirusDis*. 2022;33:1-22.
6. Erdem NŞ, Demirci S, Özel T, Mamadova K, Karaali K, Çelik HT et al. Acute transverse myelitis after inactivated COVID-19 vaccine. *Ideggyogy Sz*. 2021;74:273-6.
7. Persson MSM, Begum N, Grainge MJ, Harman KE, Grindlay D, Gran S. The global incidence of bullous pemphigoid: a systematic review and meta-analysis. *Br J Dermatol*. 2022;186:414-25.