Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Safety and efficacy of the BNT162b2 mRNA COVID-19 vaccine during Ixekizumab treatment for hidradenitis suppurativa

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To the Editor:

The spread of the coronavirus disease 2019 (COVID-19) pandemic has had a major impact on our daily lives, forcing worldwide healthcare providers to modify their methods of clinical practice. The COVID-19 vaccination is urgently needed to control the epidemic and return to normal life.[1] To date, three different types of vaccines have been approved in Italy: two based on spike protein mRNA carried by lipidic microparticles and one based on spike protein mRNA carried by adenoviruses. The technology of these vaccines is different; this, combined with short development times and new technologies adopted, makes it necessary to collect real-life efficacy and safety data.[2] Hidradenitis suppurativa (HS) is a chronic relapsing skin inflammatory disease. The therapeutic management of HS is based on immunosuppressive therapies (steroids, dapsone, cyclosporine) or immunomodulatory therapies (antibiotics or biological drugs).[3] Experts from the Hidradenitis Suppurativa Foundation of North America, based on real-life data and pathogenetic mechanisms of lethal COVID-19 cases, recommend continuing current biological treatments such as TNF-α, IL-12/IL-23, and IL-17 inhibitors, suspending treatment only in the case of COVID-19–suspicious symptoms.[4] There are no recommendations to date regarding vaccination of patients with HS undergoing therapy because COVID vaccines are new and do not fall into any of the vaccine categories known so far.

We present the case of 48-year-old woman with a body mass index of 28.3, current smoker, 6-year HS duration, and concomitant endometriosis not on drug therapy. The patient was treated with surgical drains and 3 months of systemic clindamycin plus rifampicin antibiotic treatment with poor response. In September 2019, with a Hurley II, International Hidradenitis Suppurativa Severity Score System (IHS4) = 5, Dermatology Life Quality Index (DLQI) = 22, and Visual activity score-Pain (VAS-PAIN) = 5, she started biologic treatment with adalimumab with a partial response. She then discontinued treatment after 8 months due to developing anti–TNF-α-induced lupus syndrome. Following a 3-month washout, she started off-label therapy with ixekizumab s.c. 160 mg (Hurley II, IHS4 = 6, DLQI = 26, VAS-PAIN = 6), reaching complete control of the disease after the first month of treatment (no active lesions, IHS4 = 0, DLQI = 3, VAS-PAIN = 0). After 3 months of treatment with a single HS flare, she received both doses of the BNT162b2 mRNA COVID-19 vaccine. The patient did not manifest any adverse events and had no HS flares. Treatment with ixekizumab was routinely continued according to the maintenance schedule, with administration 2 days after the first dose of vaccine and 4 days before the second dose of vaccine. Four weeks after the second dose of vaccine, the patient developed IgG anti–SARS-CoV-2 receptor binding domain amounting to 10,789.6 AU/mL.

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Conclusions

Although larger population studies are needed to validate the safety and efficacy of mRNA vaccines during biologic treatment, our case confirms that vaccine administration in a patient with HS treated with anti–IL-17 drugs is safe and effective. The patient developed high-titled antibody response, despite the important role of Th17 axis in natural infection clearance and in the development of vaccine-induced immunity.[5]

Declaration of Competing Interest

The authors declare no conflict of interest.

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