

Letter to Editor

Contraindications of COVID-19 Vaccines: A Letter to Editor

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Coronavirus disease 2019 (COVID-19, the 7th coronavirus) was a pandemic infectious disease with significant morbidity and mortality in the world. The respiratory system is often involved in COVID-19 infection. Underlying disorders such as uncontrolled asthma are a risk factor for COVID-19 infection. For protecting against COVID-19, we need vaccination-associated social care such as facial masks, distance, and sanitizers [1-3].

COVID vaccines have different protections such as the Pfizer-BioNTech vaccine which is a highly purified single-stranded and 5'-capped messenger RNA (mRNA) that has a protective rate of about 95% of the cases [4].

Every vaccine has a few side effects most of them are not serious but temporary such as fever, local pain, rash, etc. There have been reports of rare cases of death. Anaphylaxis following COVID-19 vaccination is a serious reaction. The median time for anaphylaxis occurring after the COVID-19 vaccine is 13 minutes (range 2-150 minutes). Most of these reactions (71%) occurred within 15 minutes of vaccination [5]. There are different opinions on the management of the COVID-19 vaccine reaction. A report said that Pfizer-BioNTech and Moderna vaccines are contraindicated in people who have a history of severe allergic reactions (anaphylaxis), im-

munocompromised conditions, and taking immunosuppressive drugs [6]. Pfizer-BioNTech vaccine contains polyethylene glycol (PEG 2000) which is a potential allergen. The Oxford-AstraZeneca vaccine does not contain PEG 2000 which is recommended in individuals with an allergy to PEG. Oxford-AstraZeneca vaccine has polysorbate 80. There are some reports of cross-reactivity between polysorbate 80 and PEG. This study showed that people with a history of anaphylaxis to a medicine, vaccine, or food should not receive the Pfizer-BioNTech vaccine [7]. COVID-19 BNT162b2 and mRNA-1273 vaccines are recommended during biological therapy (inhibitors of TNF- α , IL-17, IL-12/23, IL-23, and IL-4/13) and for people with chronic urticaria or allergic asthma using Omalizumab. Hypersensitivity to the COVID-19 vaccines or their excipients is only a contraindication [8]. Pfizer-BioNTech vaccine is contraindicated in any person with a history of anaphylaxis to food, vaccine, or medicine and a person who has experienced anaphylaxis of the first dose of the vaccine. Rarely, do anaphylactic reactions report to PEG. Injection site reactions, fatigue, headache, muscle pain, chills, joint pain, and fever are the most common reactions. Severe adverse reactions were more frequent after dose 2 than after dose 1. The advice of the Medicines and Healthcare Products Regulatory Agency (MHRA) to avoid the administration of the BNT162b2 vaccine should not be generalized to all patients who have experienced severe reactions to drugs and or foods. Allergic patients deserve access to

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the same publicly recommended vaccines as nonallergic patients. The Pfizer-BioNTech COVID-19 and Moderna vaccines are not live virus vaccines and, therefore, can be administered to immunocompromised patients [9].

Anaphylaxis and severe reaction to a component of the vaccine are contraindications for the next injection of the COVID vaccine.

Note: Persons with a contraindication to mRNA COVID-19 vaccines have a precaution to the Janssen COVID-19 vaccine, and vice versa. People with a contraindication to one of the mRNAs COVID-19 vaccines should not receive doses of either of the mRNA vaccines (Pfizer-BioNTech or Moderna [10, 11].

The only contraindication of the COVID vaccine is a severe allergic reaction such as anaphylaxis, and the next dose of the COVID vaccine must be referred to an allergist or clinical immunologist [12].

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