

Evaluation of probable neurological side effects of COVID-19 vaccine in patients referred to Alavi Hospital in Ardabil from 2021 to 2022

Abstract

Background: With the widespread spread of Covid-19 vaccination around the world, there are frequent case reports of neurological complications following vaccination. However, so far few studies have investigated the possible neurological side effects of the Covid-19 vaccine in large populations, and there is a lack of information about this, especially in our country.

Aim: To evaluate the neurological side effects of COVID-19 vaccine in patients referred to Alavi Hospital in Ardabil from 2021 to 2022.

Materials and methods: This cross-sectional study was conducted on 1046 people injecting various types of covid-19 vaccines, including Sinopharm, AstraZeneca, Sputnik V, barekat, Bharat, SpikoGen, and PastoCovac, who were registered in the health system due to vaccine complications. These people were evaluated in terms of the overall incidence rate of neurological complications, types of neurological complications, and the relationship between the occurrence of neurological complications and the type of vaccine.

Results: The studied population included 589 (56.3%) females and 457 (43.7%) males, and most of them were from the age group of 60 years and older (43.8%). 247 people (23.6%) had neurological complications, including headache (16.6%), weakness and lethargy (5.2%), dizziness (4.2%), decreased level of consciousness (3 1.1%), limb paralysis (0.5%), end limb numbness (0.2%), faint (0.2%), Bell's palsy (0.1%), and possibility of stroke (0.1%).

Conclusion: The results of the study primarily showed that the neurological side effects associated with the covid-19 vaccination often include non-serious and mild cases such as headache, weakness and lethargy, and dizziness, and the occurrence of dangerous neurological complications following vaccination with approved vaccines in the country is rare. However, since most of the serious neurological complications occurred after vaccination with AstraZeneca, it seems that in line with the recommendation of the European Medicines Agency, the injection of this vaccine should be done with caution.

Keywords: COVID 19, vaccine, neurological side effects.