Comparison of side effects between different brands of COVID-19 vaccines among Malaysian adult population

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ABSTRACT

Introduction: : In January 2020, COVID-19 was declared a public health emergency of international concern which targets the human respiratory tract. Since then, scientists have been developing vaccines to curb the spread and reduce the likelihood of severe effects from the infection. Several brands of vaccines are available (Pfizer-BioNtech, AstraZeneca/Oxford and Sinovac) and it was reported that people experienced a various range of side effects from them. **Objective:** This study was conducted to compare the side effects between different brands of COVID-19 vaccines among Malaysia adult population. **Materials and methods:** A cross-sectional study was conducted among 410 Malaysian adults by distributing online questionnaires via various platforms. Descriptive data was presented as frequency and percentages or means and standard deviations of means. The severity of side effects among different age group and gender of Malaysian population who has received three doses of COVID-19 vaccination were analysed by using Chi square test. P-value of <0.05 was considered statistically significant. **Results and conclusion:** The most common side effects experienced were fever, pain or swelling at the injection site, sleepiness and exhaustion, stiffness in joints and muscles, and headache following vaccination. It was found out that majority of the respondents experienced most severe side effects with Pfizer-BioNtech compared with two AstraZeneca/Oxford and Sinovac. Majority of the respondents also reported mild symptoms following the first, second and third dose. There was also a significant association between gender, age, level of severity and type of brands of vaccines. Findings from this study can provide data on the most suitable coping as well as solution or treatment to treat the side effects. In addition, this study will also benefit the researchers and scientists in vaccinology to create and produce new vaccines with fewer side effects or without any rare adverse event.

Keywords: vaccine, COVID-19, side effects, pandemic