

Retrospective study on adverse effects following COVID-19 vaccination among teenagers in Klang Valley

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ABSTRACT

Introduction: Preventive approach via vaccination remains one of the most effective ways of controlling the COVID-19 pandemic. Safety concerns especially among children and teenagers is a concern. The aim of the study was to determine the adverse effects of COVID -19 vaccine among teenagers in Klang Valley. **Methods:** A retrospective study involved 12 to less than 18 years old received COVID-19 Pfizer-BioNTech (BNT162b2) mRNA vaccine from 1st September 2021 until 15th November 2021 in Hospital Tunku Azizah. They were interviewed via telephone on the adverse effects of COVID -19 vaccination after available parental consent and assents. **Results:** A total of 300 teenagers recruited. There were 166 (55.3%) males and their mean age was 13.8 ± 1.7 years. During first vaccination, 267 (87.0%) experienced local adverse effects (injection site pain, swelling and redness), 58 (18.0%) had systemic adverse effects and 77 (25.0%) had general symptoms (fever, lethargy, giddiness, chills and flush) during first 48 hours. About 5% had symptoms by second to seven days post-vaccination. Almost all adverse effects resolved by second week. For second vaccination, 251 (83.0%) had local adverse effects, 39 (13.0%) had systemic adverse effects and 71 (24.6%) had general symptoms within first 48 hours. Less than 6.0% had side effects between second to seventh day and almost all resolved by second week of vaccination. Adverse side effects were not related to their underlying medical problems, age and gender. **Conclusion:** Common adverse effects following COVID-19 vaccination among teenagers were localised to injection within the first 48 hours.