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Epidemiology of Acute Myocarditis/Pericarditis in Hong Kong Adolescents Following Comirnaty Vaccination

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Abstract

Background

Age-specific incidence of acute myocarditis/pericarditis in adolescents following Comirnaty vaccination in Asia is lacking. This study aimed to study the clinical characteristics and incidence of acute myocarditis/pericarditis among Hong Kong adolescents following Comirnaty vaccination.

Methods

This is a population cohort study in Hong Kong that monitored adverse events following immunization through a pharmacovigilance system for COVID-19 vaccines. All adolescents aged between 12 and 17 years following Comirnaty vaccination were monitored under the COVID-19 vaccine Adverse Event Response and Evaluation Programme. The clinical characteristics and overall incidence of acute myocarditis/pericarditis in adolescents following Comirnaty vaccination were analysed.

Results

Between 14 June 2021 and 4 September 2021, 33 Chinese adolescents who developed acute myocarditis/pericarditis following Comirnaty vaccination were identified. 29 (87.88%)

were males and 4 (12.12%) were females, with a median age of 15.25 years. 27 (81.82%) and 6 (18.18%) cases developed acute myocarditis/pericarditis after receiving the second and first dose, respectively. All cases are mild and required only conservative management. The overall incidence of acute myocarditis/pericarditis was 18.52 (95% Confidence Interval [CI], 11.67–29.01) per 100,000 persons vaccinated. The incidence after the first and second doses were 3.37 (95%CI 1.12–9.51) and 21.22 (95%CI 13.78–32.28 per 100,000 persons vaccinated, respectively. Among male adolescents, the incidence after the first and second doses were 5.57 (95% CI 2.38–12.53) and 37.32 (95% CI 26.98–51.25) per 100,000 persons vaccinated.

Conclusions

There is a significant increase in the risk of acute myocarditis/pericarditis following Comirnaty vaccination among Chinese male adolescents, especially after the second dose.

Keywords: [Myocarditis](#), [Pericarditis](#), [adolescents](#), [Comirnaty](#), [Hong Kong](#)

Topic: [pericarditis](#), [myocarditis](#), [acute](#), [epidemiology](#), [adolescent](#), [hong kong](#), [vaccination](#), [covid-19 vaccines](#)

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