

Impact of COVID-19 on adverse reactions of SCIT in children

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Abstract

Objective: To investigate whether severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection increases the adverse reactions of subcutaneous specific immunotherapy in children. **Methods:** This study was conducted by collecting relevant data from children who underwent house dust mite SCIT from April 3, 2021 to March 18, 2023, including information on the time of COVID-19 infection, symptoms, and adverse reactions after each allergen injection. A mixed-effects model was used to analyze the changes in adverse reactions before and after COVID-19 infection. **Results:** Among the records of adverse reactions from 2658 injections in 123 children who underwent SCIT, the overall adverse reaction rate before COVID-19 infection was 39.8% and 30.0% after COVID-19 infection. Compared with pre-infection with COVID-19, the risks of overall adverse reactions, local adverse reactions, and systemic adverse reactions of desensitization treatment after COVID-19 infection were reduced (OR = 0.24, 0.31, and 0.28, all $P < 0.05$). Among the local adverse reactions, the incidence of the unvaccinated group was the highest (15.3% vs. 7.1%). The incidence of overall and local adverse reactions to SCIT decreased in 2-vaccinated COVID-19 recipients (OR = 0.29–0.31, $P < 0.05$). **Conclusions:** SARS-CoV-2 infection does not increase the incidence of adverse reactions to SCIT in children. SCIT can be performed according to the course of treatment after the SARS-CoV-2 infection is controlled, just like with other common infectious diseases.

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