

Transient increase of platelet associated with COVID-19 infection during TRAs as the second-line treatment in children ITP:a single center report on the prevalence of BV7 mutant in December 2022 from Beijing, China

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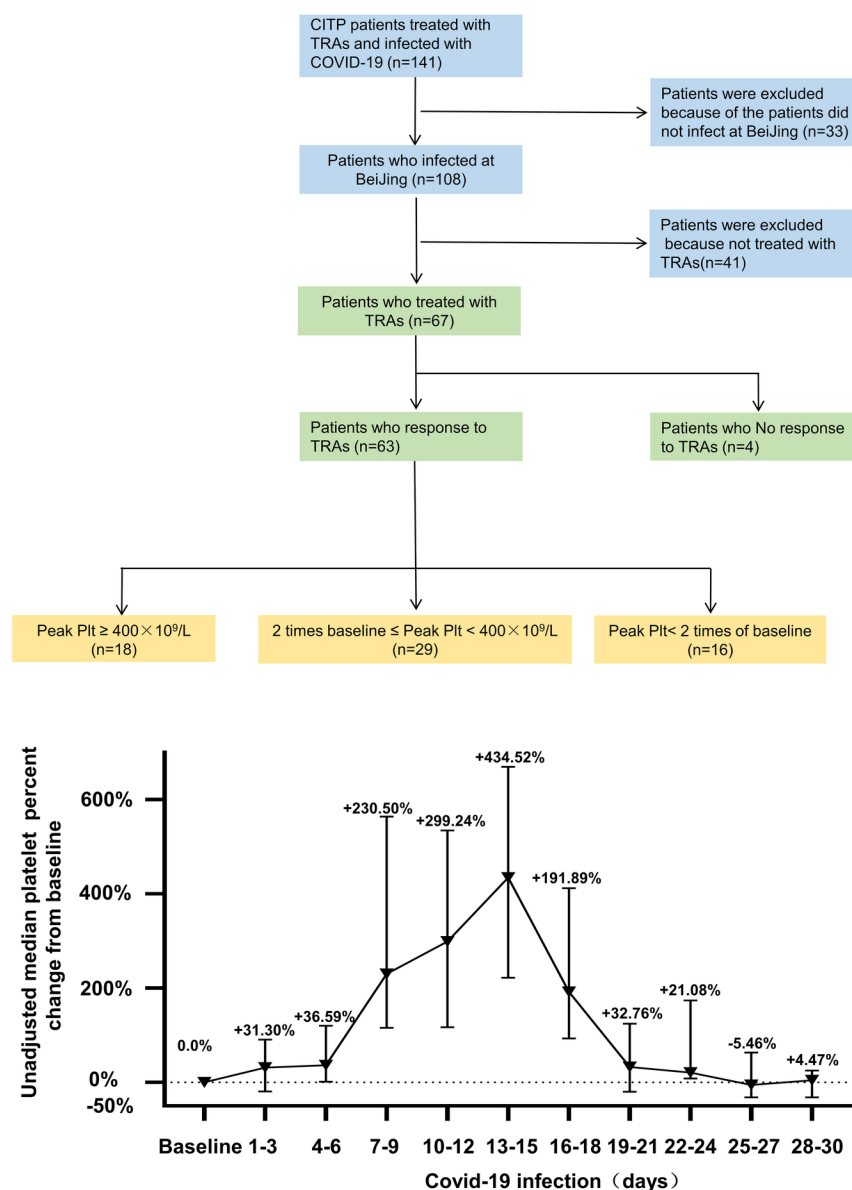
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Abstract

Background: The thrombopoietin receptor agonists (TRAs) were recommended for primary immune thrombocytopenia (ITP) during the pandemic of COVID-19. However, the incidence of thrombocytosis and thrombosis was sporadically reported in the chronic immune thrombocytopenia (CITP) patients receiving TRAs during the COVID-19 infection. **Objective:** With the local prevalence of COVID-19 in Dec 2022 in the Beijing area, we got more powerful evidence about the change in platelet (Plt) counts associated with COVID-19 infection. **Methods:** A single center observational cohort study was performed from the beginning of Dec. 2022 to the end of Feb. 2023 to enroll CITP children treated with TRAs alone as the second-line treatment and suffering from the COVID-19 infection in Dec. 2022. The Plt counts before, during, and after COVID-19 infection were collected. **Results:** In total, 67 (34 males and 33 females) patients with 8.10 (2.15, 15.70) years of age were enrolled. Sixty-three patients who had responded to the TRAs showed a transient increase in Plt counts after the infection of COVID-19. The time of starting to increase was on Day 3(2,7), and to the peak level on Day 14(7,19) of infection with the peak Plt count was $289 (88, 1974) \times 10^9/L$. With at least two months observation period from COVID-19 infection, the Plt counts of 100% (63/63) patients declined to the baseline on Day 25(14, 41). **Conclusion:** The phenomenon of transient increasing of Plt counts has been shown in the CITP children who have treatment responses to TRAs when suffering from COVID-19 infection.

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