

### Methylprednisolone/umifenovir interaction

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#### Sinus bradycardia and off label use: case report

A 12-year-old boy developed sinus bradycardia following a concomitant administration of an off label methylprednisolone and umifenovir for COVID 19 [*not all routes and dosages stated*].

On 7 August 2021, the boy was brought to hospital for cough and sore throat. He had close contact with his elder sister who had been diagnosed COVID 19 on 23 July 2021. He was diagnosed with typical COVID 19. On 9 August, he received an off label umifenovir [Arbidol] 100mg three times a day, interferon gamma and unspecified immune-modulatory treatment. Subsequently, electrocardiogram showed sinus bradycardia. In view of the acute exacerbation of the condition, on 15 August, he received IV drip of an off label methylprednisolone 20mg twice a day (approximately 0.58 mg/kg/day) to suppress severe systemic inflammation and alleviate the damage of the lung. However, heart rate reduced to 50–60 beats/min, when starting dose of 20mg of methylprednisolone was administered. After the methylprednisolone running out, the heart rate gradually returned to normal. Rectal temperature decreased to normal with second methylprednisolone 20mg on the same day. The heart rate was seriously decreased to down 40–60 beats/min at rest. Adverse drug reaction probability scale showed stronger causal relationship.

The boy's treatment with methylprednisolone was discontinued. Following the discontinuation, over 1 week the sinus bradycardia restored. After 1 month, he was cured. The occurrence of the sinus bradycardia post initiation of methylprednisolone was attributed to interaction between methylprednisolone and umifenovir.

Jiang P, et al. A rare case of drug-induced bradycardia associated with the just low dose use of methylprednisolone in a child with COVID-19. *Journal of Medical Virology* : 15 Dec 2021. Available from: URL: <http://doi.org/10.1002/jmv.27525>

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