

**Methylprednisolone/prednisolone****S****Pneumothorax: case report**

A 77-year-old man developed pneumothorax following off label use of methylprednisolone and prednisolone for COVID-19 pneumonia [*not all routes and time to reaction onset stated*].

The man, who presented with a fever for 4 days, was admitted to hospital in Japan. After examination, he was diagnosed with COVID-19 pneumonia. Based on the further investigations, he was noted to have mild to severe inflammation and respiratory failure. Subsequently, he started receiving off label treatment with favipiravir 1800mg twice daily on day 1, followed by favipiravir 800mg twice daily on days 2–12, azithromycin 500mg once daily, and IV immune-globulin [immunoglobulin] 5000mg once daily. His treatment with immunoglobulin and azithromycin was continued for 3 days after the admission. Later, he received off label IV methylprednisolone 500mg once daily for 3 days from the admission. Eventually, his conditions started improving. On day 16, he was found to be COVID-19 negative. On day 16, a chest X-ray showed bilateral lung consolidation. On day 19, a Chest CT showed an expansion of the consolidation and bilateral bronchiectasis in the lower lobes. The features appeared similar to organising pneumonia (OP) and thus corticosteroids treatment was re-initiated with off-label prednisolone 30mg. One hour following the first dose of prednisolone, he developed a new-onset chest pain, and his respiratory rate increased to 28bpm. A chest X-ray showed right-sided pneumothorax. His oxygen saturation decreased (84%), and a chest tube was inserted immediately. On day 21, chest X-ray clearly demonstrated a bulla in the right lung. Continuous air-leak through a chest tube was noted during the following 12 days. His treatment with prednisolone was continued. A chest CT showed improvement in the pneumothorax and bulla formation in the superior basal segment (segment 6; S6) of the right lung. Tests for SARS-CoV-2 remained negative. Subsequently, his respiratory rate improved to 20 bpm, and he was discharged from the hospital following the removal of the chest tube (day 30). From the chest insertion (day 19) to the removal of the tube (day 30), the dose of the prednisolone was gradually tapered from 30mg to 10mg. Later, it was concluded that the pneumothorax was associated with corticosteroid treatment with methylprednisolone and prednisolone.

Yamaya T, et al. Pneumothorax in a COVID-19 Pneumonia Patient without Underlying Risk Factors. *Internal Medicine* 59: 2921-2925, No. 22, 15 Nov 2020. Available from: URL: <http://doi.org/10.2169/internalmedicine.5731-20> 803522587