

**Betamethasone/dexamethasone/prednisone****S****Pneumocystis jirovecii pneumonia: case report**

The man in his mid-50s [exact age not stated] developed *Pneumocystis jirovecii* pneumonia (PJP) during treatment with betamethasone, dexamethasone and prednisone for COVID-19 infection.

The man was admitted for acute respiratory failure due to COVID-19 pneumonia in November. Prior to admission, he had been treated with IM betamethasone 4mg once a day along with ceftriaxone and ciprofloxacin for 5 days at home. Upon admission, he started receiving treatment with IV dexamethasone 6mg QD in addition to ceftaroline fosamil [ceftaroline] for 10 days. Then, treatment with oral prednisone 25mg once a day was started. Concomitantly, he was prescribed enoxaparin sodium [enoxaparin] as a prophylactic treatment. Additionally, he was started on continuous positive airway pressure (CPAP) ventilation for 10 days, then on oxygen therapy with Venturi mask. After 18 days of admission, he was discharged from the hospital with improved condition, no respiratory symptoms and positive SARS-CoV-2 nasopharyngeal swab test. Prednisone was progressively tapered up to the withdrawal 10 days from discharge. Ten days later, he started experiencing low-grade fever, cough and exertional dyspnoea. Subsequently, 28 days after discharge, he was re-admitted to hospital. On admission, his SpO<sub>2</sub> on room-air was 85% and his arterial PaO<sub>2</sub> was 54.3mm Hg. Hence, oxygen therapy with Venturi mask was started. At this point, his SARS-CoV-2 nasopharyngeal swab tested negative. A high-resolution CT revealed notable worsening of the "ground glass" pattern. Hence, empirical treatment with ceftobiprole, oseltamivir and levofloxacin was initiated; however, no improvement was noted. After 5 days of admission, a bronchoalveolar lavage fluid was collected, on which *P. jirovecii* direct immunofluorescence test was positive. Based on these examinations and his symptoms, diagnosis of PJP was made.

Therefore, the man's empirical treatment with ceftobiprole, oseltamivir and levofloxacin was discontinued, and targeted therapy with cotrimoxazole [trimethoprim-sulphamethoxazole] and methylprednisolone was started, with rapid improvement. After 8 day of administration of cotrimoxazole, he achieved respiratory stability with SpO<sub>2</sub> of 98%. After 14 days of admission, he was discharged from the hospital, with a prescription of cotrimoxazole and prednisone to complete 21 days of PJP therapy. At the end of the therapy, a high-resolution CT was performed and it revealed complete resolution of pulmonary infiltrates.

Viceconte G, et al. *Pneumocystis jirovecii* pneumonia in an immunocompetent patient recovered from COVID-19. *Infectious Diseases* 53: 382-385, No. 5, 1 Mar 2021.

Available from: URL: <http://doi.org/10.1080/23744235.2021.1890331>

803560880