Dexamethasone

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Bordetella hinzii pneumonia and pulmonary aspergillosis: case report

A 63-year-old man developed pulmonary aspergillosis and *Bordetella hinzii* pneumonia during immunosuppressant drug therapy with dexamethasone.

The man, who had no medical history, presented to hospital with shortness of breath, cough and asthenia. He had been experiencing the symptoms from three days. Upon admission, a positive rapid antigen test was noted. Later, based on positive SARS-CoV-2 RT-PCR test and chest CT scan, a diagnosis of COVID-19 was made. He received SC dexamethasone 6 mg/day for 10 days along with ceftriaxone, spiramycin and unspecified low molecular weight heparin. On day 2 of hospitalisation, he was shifted to ICU. Antimicrobial drugs were discontinued. Awake prone positioning combined with high flow nasal oxygen therapy were initiated. On day 9, acute respiratory distress syndrome, gas exchange deterioration and worsening hypoxaemia were noted. He was put on mechanical ventilation. Bacterial superinfection was not observed. After 48h, his oxygenation level improved. On day 13, his respiratory function aggravated, and he developed fever and purulent aspiration. Increased CRP and procalcitonin levels were noted. He then received piperacillin/tazobactam for four days. Endotracheal aspirate (EA) showed oropharyngeal flora, methicillin-susceptible *Staphylococcus aureus*, amoxicillin-susceptible *Escherichia coli*, *Bordetella hinzii* and *Candida tropicalis*. On day 17, repeat EA showed decreased methicillin-susceptible *Staphylococcus aureus*, increased *Bordetella hinzii*, and amoxicillin-susceptible *Escherichia coli* and *Aspergillus fumigatus*, which was absent in previous EA. *Aspergillus fumigatus* was considered as an infection because respiratory failure continued to worsen despite drug treatment and ventilatory support for severe acute respiratory distress syndrome. He then received voriconazole and amoxicillin/clavulanic-acid [co-amoxiclav]. His fever persisted, radiological finings worsened. His clinical condition continued to deteriorate. On day 25, EA showed *Bordetella hinzii* and *Candida tropicalis* and slightly decreased amoxicillin-susceptible *Escherichia coli*, which were considered as colonisation.

Thereafter, the man's treatment was shifted to piperacillin/tazobactam. Subsequent EA samples showed negative results. On day 46, he underwent extubation, and he was discharged uneventfully.

Lakhal HB, et al. Bordetella hinzii Pneumonia in Patient with SARS-CoV-2 Infection. Emerging Infectious Diseases 28: 844-847, No. 4, Apr 2022. Available from: URL: https://wwwnc.cdc.gov/eid/article/28/4/21-2564_article

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