

中文題目：仰賴體外循環維生系統暨連續性血液透析而存活之退伍軍人症患者案例報告
英文題目：Legionella Pneumonia Complicated By ARDS Requiring Venovenous ECMO and CRRT support.

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Introduction:

Legionella species are common atypical bacterial pathogen for community acquired pneumonia and hospital acquired pneumonia. It is usually transmitted by exposure to the contaminated water or soil. There is a gap between recognizing the disease and realizing the clinical severity of Legionella pneumonia. There is also lacking in reported case about Legionella pneumonia with severe acute respiratory distress syndrome (ARDS) and multiple organs failure that requiring venovenous extracorporeal membrane oxygenation (V-V ECMO) in combination with continuous renal replacement therapy (CRRT) support.

Case presentation:

A 54 y/o male with type 2 diabetes mellitus, hypertension and coronary artery disease presented to our emergent department with fever, productive cough and shortness of breathe for one week. On evaluation, his vital signs were BP:165/98mmHg, PR:133bpm, RR:20/min, BT:38.7 degree of Celcius, SpO₂:99%. The initial chest X-ray revealed left upper lobe consolidation. Severe respiratory distress developed a few hours later with observable blood gas: pH:7.469, PaCO₂:23.4mmHg, PaO₂:68.7mmHg under non-rebreathing mask 15L/min use. Intubation was introduced immediately. He was started on IV levofloxacin and subsequently admitted to medical intensive care unit (MICU). The urinary legionella antigen test was positive for *Legionella pneumophila* on the second day in the MICU.

By the course day 6, severe respiratory distress and hypoxemia were persisted even under maximum ventilator support and fully paralyzed. The blood gas was observable for pH:7.249, PaCO₂:60.4mmHg, PaO₂:53.8mmHg. The chest X-ray revealed degenerating bilateral consolidation, which resulting in ARDS (PaO₂/FiO₂=53.8). V-V ECMO was implemented owing to severe hypoxemia and hypercapnea. On the next day, CRRT was also introduced due to acute kidney injury with anuria.

By the course day 26, there was significant improvement in blood gas PaO₂ level and the chest x-ray. We removed the ECMO subsequently and the patient tolerated the ventilator support only. On day 31, liberation was introduced successfully.

Discussion

This case emphasizes the successful initiation and utility of V-V ECMO and CRRT in Legionella

pneumonia patient complicated by ARDS and multiple organs failure. Even though the Legionella disease is a widely popular pathogen for community acquired pneumonia and the broad use of specific antibiotics can resolve the infection successfully. Some cases still progressed to severe critical condition. Detection and recognition of Legionella pneumonia should be implemented much earlier.