

Journal of Pulmonary & Respiratory Medicine

Extracorporeal Membrane Oxygenation

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Received date: Dec 29, 2014, Accepted date: Jan 02, 2014, Published date: Jan 04, 2014

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Clinical Image



A 33-year-old male patient was referred to our hospital with the complaints of coughing, shortness of breath and respiratory distress present for the last three years, deteriorated within the last three months. He was not a smoker. Respiratory rate was 45 /minute. Oxygen saturation 74 % with 12 L/min, arterial blood pressure 130/86 mm/Hg and heart rate was 95/min. End-inspiratory rales were heard over all zones bilaterally. Laboratory parameters were normal. Arterial blood gas measurements were as follows in ambient air. Ph: 7.4, PaO₂: 36 mm/hg, PaCO₂: 32 mm/Hg. On chest X-ray, bilateral widespread alveolar infiltrations, ground glass, and crazy paving appearance were detected.

Patient was entubated in our intensive care unit. No microbial growth was found in blood, urine and sputum cultures. Bronchoalveolar lavage fluid was obtained from middle lobe of the right lung; PAS (+) alveolar proteinosis was detected. It was decided to carry out total bronchoalveolar lavage of the right lung first in combination with ECMO. Total lung lavage was carried out at sevenday intervals. The patient was extubated on the same day. His oxygen saturation level increased to 95 percent. On chest X-ray and thorax CT, regression was seen. Patient was discharged from the intensive care unit with oxygen support and lung transplantation was recommended. Although natural history of PAP is variable, one third of the cases may die due to progressive hypoxemia and intervening secondary infections. In cases with severe hypoxemia which can not be improved despite mechanical ventilation support, whole lung lavage with the accompaniment of ECMO may be lifesaving (Figures 1 and 2).