

**“Successful use
of high frequency
oscillatory
ventilation
for refractory
hypoxemia in H1N1
with ARDS”**

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The worldwide 2009-2010 pandemic of novel H1N1 influenza reminds us that influenza can still be a lethal disease. Severe respiratory failure (including acute lung injury and acute respiratory distress syndrome) caused by 2009 H1N1 influenza infection has been reported worldwide. Refractory hypoxemia is a common finding in these patients and can be challenging to manage.

Refractory hypoxemia in H₁N₁ ARDS is associated with high mortality (15-40%). This usually requires high ventilator settings with nonconventional modes of ventilation, and extracorporeal membrane oxygenation in some cases (5-10%). Use of HFOV has shown a non-significant trend towards improved oxygenation in severe ARDS when conventional ventilation failed. This is probably the first report of successful use of HFOV in H₁N₁ ARDS. Early initiation of antiviral and antibiotic therapy along with proper supportive therapy helped in better outcome.

We present a case of ARDS secondary to infection with the influenza A (H1N1) virus.

“A 36 year old male patient was brought to casualty with h/o fever and breathlessness. Patient was admitted to ICU in severe sepsis with ARDS. Patient had high leukocyte count (13,000-16,000/cu.mm), low platelet count (75000/-), deranged liver and kidney functions. Bacterial cultures of blood, urine and broncho-alveolar lavage (BAL) were negative. Peripheral smear of blood for Malaria parasite and dengue serology were negative. However H₁N₁ antigen was positive. Tablet Oseltamivir 75 mg twice daily was started along with intravenous antibiotic therapy. He was put on mechanical ventilation and Infusion dopamine to support hemodynamic. He continued to remained febrile, required high FiO₂ (0.7-0.8) and PEEP (15 cm H₂O) to maintain oxygenation (PaO₂ 60-70). On fifth day of his admission to ICU, based on the above findings, high frequency oscillatory ventilation (HFOV) was started with FiO₂ 0.7, frequency 5.0, amplitude 86 and mean airway pressure 25. After two hours PaO₂ increase to 120 and steadily improved further. Over next 48 hours, FiO₂ could be decreased below 0.5, dopamine was stopped and liver and kidney function started showing improving trends. HFOV was continued for three days and thereafter he was weaned off to minimal SIMV support. He was subsequently discharged from ICU to step down unit on day fifteen of his admission.”

Biography

Dr. Chandralekha completed her MBBS in 1972 and M.D Anesthesiology in 1975 from King George's Medical College, Lucknow. She is Professor & Head, Department of Anesthesiology, All India Institute of Medical Sciences, New Delhi-110029, a premier medical college of the country. She has published many articles in reputed journals and has been invited as a speaker and to share her clinical experience with experts of other countries. Her field of specialization is anesthesia for renal transplantation and intensive care. She is board member of Indian College of Anesthesiology and Chairperson of academic committee of ICA. She is also an executive member of Bureau of Indian standard (BIS), chairperson of standardizing anesthesia & resuscitation equipment & member of ISO.