



36th World Cardiology Conference; 29th International Conference on Cardiology and Cardiovascular Diseases

Effects of invasive mechanical ventilation and respiratory therapy on haemodynamics of acute brain-injured patient

Freiser Eceomo Cruz Mosquera

Universidad Santiago de Cali, (Colombia)

Invasive mechanical ventilation is a life support strategy frequently used in the intensive care unit. According to some authors, it is used in up to 5 out of 10 critical patients, a figure that may vary depending on the underlying disease. Although this strategy followed by adequate bronchial hygiene can improve survival, its arbitrary use produces complications, especially hemodynamic, in subjects with acute brain injury (ABI). Regarding invasive mechanical ventilation in patients with ABI, two topics of discussion are apparently resolved at the present moment: hyperventilation therapy and increased positive end-expiratory pressure (PEEP). Hyperventilation therapy as a first measure for the treatment of intracranial hypertension has been contraindicated due to significant changes in cerebral blood flow and cerebral perfusion pressure, with consequent ischemia (particularly when PCO₂ is less than 30mmHg); On the other hand, although it is assumed that the increase in PEEP is associated with important changes in mean arterial pressure and cerebral perfusion pressure, the role of pulmonary compliance in this process has been described in the last years, showing that in the presence of low pulmonary compliance, the impacts of PEEP on haemodynamics are minimized. Finally, although bronchial hygiene techniques can be associated with slight changes in mean arterial pressure and cerebral perfusion pressure, this effect is enhanced in the absence of adequate sedation and execution of instrumental maneuvers such as endotracheal suctioning.

Biography

Freiser Eceomo Cruz Mosquera is a Respiratory Therapist from Universidad Santiago de Cali, Specialist in Pedagogy and Teaching from Fundación Universitaria del Area Andina and Master in Epidemiology from Universidad Libre (Colombia). He has 9 years of clinical experience and 7 years of teaching and research experience. Until now he has published about 25 scientific articles in the areas of public health, critical respiratory care and epidemiology.