



RESEARCH TOPIC DASME6

AI for a safer mechanical ventilation in patients without acute respiratory failure

Curriculum DASME standard

Research Area

Service Area

Laboratory name and address

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Abstract

Patients mechanically-ventilated for reasons other than acute respiratory failure are at risk of developing acute respiratory distress syndrome (ARDS), which increases duration of mechanical ventilation, length of stay in the intensive care unit (ICU) and mortality. While mechanical ventilation with low tidal volumes is advocated in these patients to prevent ARDS, few other risk factors are known. Advanced respiratory monitoring, including continuous recording of airway and esophageal pressure, inspiratory and expiratory flow and distribution of ventilation within the lungs could highlight other potentially modifiable risk factors. This single center prospective observational study will enroll 100 adult patients mechanically-ventilated but without respiratory failure at the time of ICU admission. The aim is to compare different respiratory parameters, continuously recorded during the first 24 hours of mechanical ventilation, in their ability to predict the development of ARDS.

Main technical approaches

Patients mechanically-ventilated for reasons other than acute respiratory failure are at risk of developing acute respiratory distress syndrome (ARDS), which increases duration of mechanical ventilation, length of stay in the intensive care unit (ICU) and mortality. While mechanical ventilation with low tidal volumes is advocated in these patients to prevent ARDS, few other risk factors are known. Advanced respiratory monitoring, including continuous recording of airway and esophageal pressure, inspiratory and expiratory flow and distribution of ventilation within the lungs could highlight other potentially modifiable risk factors. This single center prospective observational study will enroll 100 adult patients mechanically-ventilated but without respiratory failure at the time of ICU admission. The aim



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Type of contract

PhD scholarship of € 21.000 gross per year awarded by Humanitas University. This sum is exempt from IRPEF income tax according to the provisions of art. 4 of Law no. 476 of 13th August 1984, and is subject to social security contributions according to the provisions of art. 2, section 26 and subsequent sections, of Law no. 335 of 8th August 1995 and subsequent modifications.

Borsa di dottorato pari a € 21.000 annui lordi erogata da Humanitas University. Importo non soggetto a tassazione IRPEF a norma dell'art. 4 della L. 13 agosto 1984 n. 476 e soggetto, in materia previdenziale, alle norme di cui all'art. 2, commi 26 e segg., della L. 8 agosto 1995, n. 335 e successive modificazioni.