A75 - Protective mechanical ventilation to prevent acute respiratory distress syndrome

A Kuzovlev ¹; A Shabanov ²; T Smelaya ¹; A Goloubev ¹; V Moroz ¹

¹Federal Research and Clinical Center of Intensive Care Medicine and Rehabilitiology, V.A. Negovsky research institute of general reanimatology, Moscow, Russia, ²N.V. Sklifosofsky Moscow City Research Institute of Emergency Care, Federal Research and Clinical Center of Intensive Care Medicine and Rehabilitiology, V.A. Negovsky research institute of general reanimatology, Moscow, Russia

Introduction:
Mechanical ventilation (MV) in protective mode seems the most reasonable way for prevention of acute respiratory distress syndrome (ARDS) in ventilator-associated pneumonia (VAP). The aim was to evaluate the efficiency of protective MV in preventing ARDS in VAP.

Methods:
This retrospective study was done in 2013—2017. 102 patients with abdominal sepsis and VAP were enrolled in the study. Patients were split in 2 groups: 1. protective MV: VAP patients were ventilated in protective mode (tidal volume (TV) 6-8 ml/kg); 2. standard MV: VAP patients were ventilated with TV 8—10 ml/kg. The ARDS incidence was assessed as primary endpoint. Secondary endpoints: duration of MV, length of ICU stay, 30-day mortality. Statistical analysis was done by Statistica 7.0 (± 25—75 percentiles interquartile range (IQR); p <0.05).

Results:
There were significant differences in ARDS incidence between groups: ARDS developed in 12.4% of protective MV groups vs. 68.3% of standard MV group (p=0.0001, Fisher’s exact test). VAP patients ventilated in a protective mode presented with lower duration of MV (12.2±4.2 days) and ICU stay(16.1±3.2 days) than patients with standard MV (17.2±5.2 and 20.1±5.5 days). There were significant differences in mortality rates between patient groups: 24.1% in protective MV and 47.2% in standard MV (p=0.0043, Fisher’s exact test).

Conclusion:
Protective MV prevents the development of ARDS in VAP septic patients.