DOI: 10.5152/TurkThoracJ.2019.125

[Abstract:0792] MS-177 [Accepted: Oral Presentation] [Respiratory System Infections]

Can the ARDS Diagnosis at Intensive Care Admission Effect on Prognosis of Ventilator Associated Pneumonia

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Objectives: Acute respiratory distress syndrome (ARDS) is one of the risk factors causing development of ventilator associated pneumonia (VAP) due to multidrug resistant bacteria. However, the effect of presence of ARDS diagnosis before VAP is not known clearly. The aim of our study was to assess the influence of ARDS diagnosis at intensive care admission on prognosis in patients with VAP.

Methods: The study conducted retrospectively and prospectively with patients diagnosed with VAP whose bacterial pathogen was known as a result of microbiological examination between January 2011 and October 2018. Demographic, clinic and laboratory findings and mortality situation were recorded, and the comparison was performed for both groups according to presence of ARDS diagnosis at admission.

Results: The study consisted of 212 patients with VAP [71.7% male, median age 71 years (57-80), median APACHE II 23 (18-28)]. ARDS was diagnosed in 59 (20.7%) patients at intensive care unit application. The patients with ARDS were younger than other group [62 (49-77) & 73 (61-81), p=0.002], fever at the beginning of VAP [38 (37.1-38.2) & 37.4 (36.7-38), p=0.011] and the frequency of bilateral radiological findings (83% & 54%, p=0.001) were found to be much higher in these patients. There was no difference respect to early and late-onset VAP and drug resistance rates between two groups. The bacteriological isolated pathogen was *Acinetobacter baumannii* and more frequently in patients with ARDS (74.6% & 59.5%, p=0.055). Also, the rate of bacteremia related to VAP was shown as high in this group (20.7% & 8.5%, p=0.029). There was no difference between patients with and without ARDS at the admission according to inflammation parameters, duration of mechanical ventilation, length of intensive care unit and hospitalization, and mortality rate.

Conclusion: The spread of radiological findings and rate of invasive disease were more frequent in patients accepted in respiratory intensive care unit due to ARDS and having VAP during follow up time, but the presence of ARDS may not effect on VAP prognosis.

Keywords: ARDS, respiratory failure, ventilator associated pneumonia