

DECREASING TREND OF ACUTE RESPIRATORY DISTRESS SYNDROME AFTER TRAUMA: A POPULATION-BASED COHORT STUDY

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Abstract

Purpose:

We sought to determine if there was a change in the overall incidence of acute respiratory distress syndrome (ARDS) at our Level 1 Trauma Center.

Methods:

This is a population-based cohort study with a focus on patients admitted to our Trauma ICU from 2004 - 2009 in Olmsted County, Minnesota. The definition of ARDS was based on the American-European Consensus Conference criteria. Chi square, Wilcoxon Rank Sum and Kruskal-Wallis tests were performed. Data are expressed as median [IQR]; p value of < 0.05 was considered significant.

Results:

We identified 438 trauma ICU patients. Number of ICU admissions did not change but the APACHE III increased ($p < 0.0086$). Forty Four (10%) developed ARDS. Age was 55.1 [44 – 69], ISS 27.3[13-35] and APACHE III 55 [36-75]. Patient that developed ARDS had significantly more injuries and chest trauma. The case fatality of ARDS did not change over time ($p = 0.330$). However, we observed an incidence reduction of trauma-related ARDS from 10.53 to 2.05 per 100,000 person year ($p < 0.001$) over the 6 year period.

Conclusion:

Despite increased illness severity; we noted a decline in the incidence of trauma-related ARDS. This may be attributable to changes in critical care practice.