

Study looks at addition of sigh ventilation in trauma patients

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For trauma patients receiving mechanical ventilation at risk of poor outcomes, the addition of sigh breaths does not significantly increase ventilator-free days, according to a study published online Oct. 25 in the

Journal of the American Medical Association to coincide with the annual congress of the European Society of Intensive Care Medicine, held from Oct. 21 to 25 in Milan.

Richard K. Albert, M.D., from the University of Colorado in Aurora, and colleagues conducted a pragmatic, randomized trial of sigh breaths plus usual care from 2016 to 2022 among [trauma patients](#) with one or more of five [risk factors](#) for developing [acute respiratory distress syndrome](#). A total of 524 patients were enrolled and randomly assigned to sighs (sigh volumes producing plateau pressures of 35 cm H₂O delivered once every six minutes) or usual care alone (261 and 263 patients, respectively).

The researchers found that the median ventilator-free days was 18.4 and 16.1, respectively, in [patients](#) randomly assigned to sighs and usual care alone. The unadjusted mean between-group difference in ventilator-free days was 1.9 days; the prespecified adjusted mean difference was 1.4 days. The prespecified secondary outcome of 28-day mortality was 11.6 percent for the sighs group and 17.6 percent for the usual care group. There were no between-group differences in nonfatal adverse events (30.9 versus 30.7 percent).

"Although failing to demonstrate an unambiguous improvement in the primary outcome, their trial provides reassurance that the sigh, at least in this patient population, appears to be safe and possibly beneficial," Giacomo Bellani, M.D., Ph.D., of the University of Trento, Italy, and Antonio Pesenti, M.D., of the University of Milan, write in an accompanying editorial.

Several study authors and the editorial authors disclosed ties to industry.

More information: Richard K. Albert et al, Sigh Ventilation in Patients With Trauma, *JAMA* (2023). [DOI: 10.1001/jama.2023.21739](https://doi.org/10.1001/jama.2023.21739)

Giacomo Bellani et al, Sigh Breaths for Trauma Patients Receiving Mechanical Ventilation, *JAMA* (2023). [DOI: 10.1001/jama.2023.21744](https://doi.org/10.1001/jama.2023.21744)

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