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Track: Safety & Quality - **Best Track Abstracts 2nd Prize**

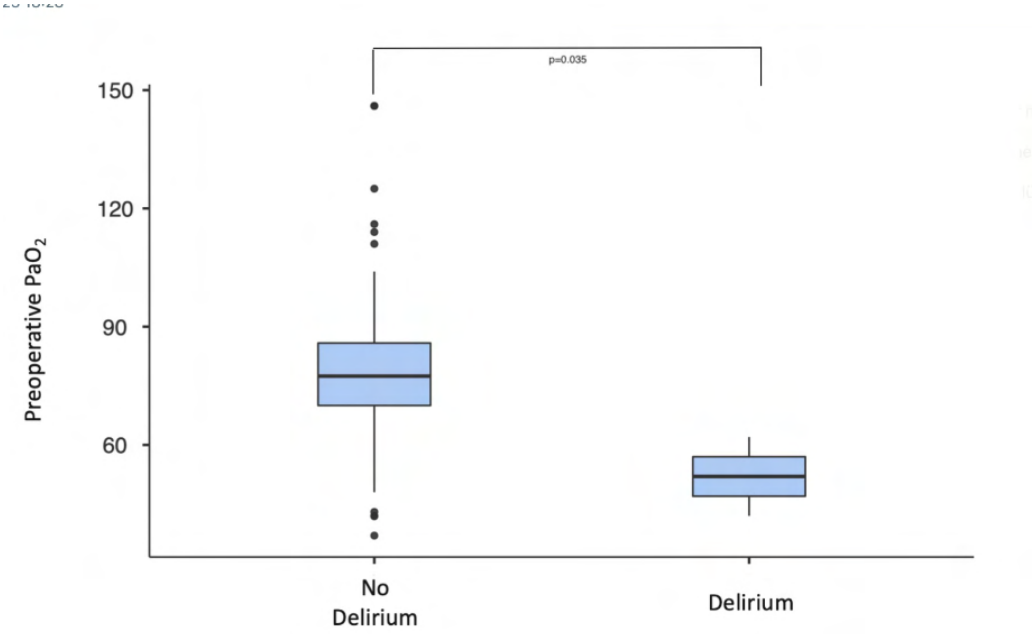
Title: Delirium After Thoracic Surgery; Assesment of Preliminary Results of SBI Approach in Thoracic Surgery

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Abstract: **Background and Objectives:** Perioperative delirium (POD) is a common and potentially life-threatening neuropsychiatric disorder. The incidence of POD is reported to be between 5% to 52%, and it constitutes a significant burden on both the healthcare sector and society. This study investigates the relationship between the some preoperative parameters and POD in patients who underwent the Safe Brain Initiative (SBI) approach in Thoracic Surgery.
Methods: The study included 189 patients who underwent surgery by the Department of Thoracic Surgery at Ibn Sina Hospital of Ankara University Faculty of Medicine between 2021 and 2023. Patients were subjected to the Safe Brain Initiative (SBI) protocol, which is implemented at our university during the preoperative period, admission to the postoperative recovery unit, and transfer to the ward. In this study, the postoperative Nu-DESC score, postoperative pain scores, preoperative oxygenation status, and the duration of stay in the postoperative intensive care unit were examined for the patients. The SPSS Statistics for Windows, Version 17.0, Chicago: SPSS Inc. program was used for data analysis. Descriptive statistics for categorical variables are presented as numbers and percentages (%), while descriptive statistics for continuous variables are reported as mean ± standard deviation following an assessment of the data distribution. The Shapiro-Wilk test was used for statistical test selection. As a result of non-parametric data distribution observation, the Mann-Whitney U test was applied, and Fisher's exact test was used for the comparison of categorical variables.
Results: The incidence of delirium was found 1.59% (n=3). The type of surgery whether it is minimally invasive or not, was not associated with delirium (p=0.61). Among the patients with delirium, 2 were classified as ASA I, and 1 was classified as ASA II. There was no significant difference in age and delirium (p=0.74). Similarly, there was no statistical significance between delirium and pain scores at rest and with movement (p=0.64, p=0.45,

respectively). There was also no difference in terms of the duration of stay in the intensive care unit (p=0.89). When comparing preoperative PO2, it was 52±14.1 in the group with delirium and 78.7±16.41 in the group without delirium. (Graph 1)There was no statistically significant difference in the preoperative SpO2 values of the patients (p=0.057).

Discussion and Conclusion: Postoperative delirium is related to higher mortality rates, difficulties in functional recovery, longer recovery periods, and increased period of hospitalization. SBI approach has raised our awareness about postoperative delirium. Assesment of these preliminary results showed us that preoperative partial oxygen pressure may be related with postoperative delirium. As a conclusion, delirium after thoracic surgery may be related with oxygen pressure, this is important because prehabilitation before surgery may have positive impact for preventing. SBI approach will help us to be aware of and prevent negative outcomes.



References: 1. Iamaroon A, Wongviriyawong T, Sura-Arunsumrit P, Wiwatnodom N, Rewuri N, Chaiwat O. Incidence of and risk factors for postoperative delirium in older adult patients undergoing noncardiac surgery: a prospective study. BMC Geriatrics. 2020;20(1). 2. Cinar A, Ozmenler K, Ozsahin A, Trzepacz P. Reliability and validity of the Turkish translation of the Delirium Rating Scale-Revised-98. Dusunen Adam: The Journal of Psychiatry and Neurological Sciences. 2014;27:186-93. 3. Meço BC, Borda de Agua Reis A, Berger-Estilita J, Jakobsen K, Alkış N, Radtke FM. Precision Anaesthesia: Advancing Patient-Centered Precision Care Through Repetitive Assessment of PROMs with the Safe Brain Initiative Approach. Turk J Anaesthesiol Reanim. 4. Emery A, Wells J, Klaus SP, Mather M, Pessoa A, Pendlebury ST. Underestimation of Cognitive Impairment in Older Inpatients by the Abbreviated Mental Test Score versus the Montreal Cognitive Assessment: Cross-Sectional Observational Study. Dementia and Geriatric Cognitive Disorders Extra. 2020;10(3):205-15.