

Post-hoc Analysis of the NONSEDA Trial



In recent years, there has been an increase in awareness of minimising sedation in the ICU. Several benefits of avoiding heavy sedation have been reported in clinical studies, and clinical guidelines also encourage less sedation.

Findings from the NONSEDA trial were published in 2020. In this trial, 700 critically ill patients were randomised to receive light sedation or non-sedation during mechanical ventilation. Findings from this trial showed more days free of coma or delirium and fewer thromboembolic events in the non-sedated group. No differences were observed regarding the length of mechanical ventilation, ICU admission or 90-day mortality. A beneficial effect of non-sedation was also observed on physical function at extubation and ICU discharge. However, this difference was not observed three months later. No difference regarding cognitive function or psychological health was reported. Nearly 40% of patients in the NONSEDA trial randomised to non-sedation had to be given sedation at some point during their admission. This was defined as failure of non-sedation.

In this post-hoc study of the NONSEDA trial, researchers aim to obtain knowledge of the critically ill, mechanically ventilated patients who experienced failure of non-sedation. Patients were divided into two groups - those who were randomised to non-sedation and did not require continuous sedation during mechanical ventilation (also defined as non-sedation success) and those who were randomised to non-sedation but needed continuous sedation at least once during mechanical ventilation (defined as non-sedation failure).

Patients with non-sedation success and non-sedation failure had similar baseline characteristics, including age, BMI and severity scores. However, findings of this posthoc analysis show that patients with non-sedation success had more days alive without sedation, more days alive without mechanical ventilation, more coma and delirium free days and more organ support free days. No difference in mortality, quality of life, or ADL function was found between the two groups.

The post-hoc analysis does not clearly indicate that non-sedation is more likely to fail in a specific age group, disease category or disease severity. It is thus still difficult to predict whether or not non-sedation will be a success. Non-sedation is a complex treatment modality, and each patient's condition can determine its failure or success. The researchers found that men were more likely than women to experience failure of non-sedation. The exact cause of this difference is not clear.

Overall, the interplay between sedation/non-sedation and delirium remains complex. There is no guarantee of the outcome. Sometimes, sedation can cause delirium, and sometimes non-sedation can be impossible due to delirium. Hence, despite the data generated from the NONSEDA trial and the posthoc analysis, it is difficult to conclude causality. However, current guidelines still recommend light sedation with a daily wake-up call, and while results can vary from patient to patient, in general, non-sedation and/or light sedation should be considered as viable options in the ICU.

Source: [Journal of Critical Care](#)

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