Awake Prone Positioning for Non-Intubated COVID-19 Patients

Prone positioning can improve oxygenation and mortality for intubated patients with moderate to severe acute respiratory distress syndrome (ARDS). Prone positioning of non-intubated patients called awake prone positioning has been used for non-intubated patients with COVID-19 related acute hypoxaemic respiratory failure. It has been proven to improve oxygenation and potentially avoid intubation. Multiple societies have recommended awake-prone positioning for COVID-19 patients because of its potential benefits, low risk and easy implementation. However, results from clinical trials over the past year have been contradictory.

In this systematic review and meta-analysis, the researchers synthesised the outcomes associated with awake prone positioning and evaluated these outcomes in relevant patient subpopulations. They searched MEDLINE, Embase, PubMed, Web of Science, Scopus, MedRxiv, BioRxiv, and ClinicalTrials.gov for RCTs and observational studies of awake prone positioning in patients with COVID-19 related acute hypoxaemic respiratory failure.

The primary outcome of the analysis was the cumulative intubation risk across randomly controlled clinical trials.

Researchers identified 1234 studies and assessed 138 full-text articles. A total of 29 studies were included in the study after exclusions. Ten were randomised controlled clinical trials, and 19 were observational studies. Awake-prone positioning procedures were variable, and the targeted daily probing duration varied between 1 h to 16 h. In the ten RCTs, awake prone positioning compared with the supine position reduced the need for intubation in the overall population. A reduced need for intubation was also observed among patients who received advanced respiratory support at enrolment and in the ICU but not in patients who received conventional oxygen therapy or in non-ICU settings.

Overall, this analysis shows that in patients with COVID-19-related acute hypoxaemic respiratory failure, awake prone positioning reduced the need for intubation. This was especially true among those who required advanced respiratory support and patient in the ICU setting. These findings suggest that awake-prone positioning should be used in patients with acute hypoxaemic respiratory failure due to COVID-19 and require advanced respiratory support or are treated in the ICU.

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