

INPLASY PROTOCOL

To cite: Abroug et al. Awake prone positioning in covid-19 related hypoxemic respiratory failure: Systematic Review and Meta-analysis of randomized trials. Inplasy protocol 202330109. doi: 10.37766/inplasy2023.3.0109

Received: 27 March 2023

Published: 27 March 2023

Corresponding author:
Fekri Abroug

fekri.abroug@gmail.com

Author Affiliation:
CHU F.Bourguiba.

Support: None.

Review Stage at time of this submission: Preliminary searches.

Conflicts of interest:
None declared.

Awake prone positioning in covid-19 related hypoxemic respiratory failure: Systematic Review and Meta-analysis of randomized trials

Abroug, F¹; Lahmar, M²; Hammouda, Z³; Ouanes-Besbes, L⁴.

Review question / Objective: Verify whether a single RCT had a large effect on the scientific weight surrounding awake prone position use.

Eligibility criteria: To be eligible for inclusion, studies have to use a randomized controlled trial design, including hospitalized patients with hypoxemic respiratory failure due to Covid-19; compare awake prone positioning with usual care (no prone positioning); and report on endotracheal intubation.

Information sources: In MEDLINE, EMBASE, CINAHL, CENTRAL, and Science Citation Index; contact with authors; references of published studies.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 March 2023 and was last updated on 27 March 2023 (registration number INPLASY202330109).

INTRODUCTION

Review question / Objective: Verify whether a single RCT had a large effect on the scientific weight surrounding awake prone position use.

Rationale: Awake prone positioning (APP) is an adjuvant therapeutic choice for

hypoxemic respiratory failure that become common practice during the Covid-19 pandemic. Its recommendation is based mainly on a meta-trial whose results rely largely on a single RCT.

Condition being studied: Awake prone position in hypoxemic respiratory failure.

METHODS

Search strategy: Relevant studies will be searched in MEDLINE, EMBASE, CINAHL, CENTRAL, and Science Citation Index for RCTs published up to December 31, 2022 using the following MeSH terms: (prone position) and (ARDS or hypoxaemic respiratory failure) and (COVID-19 or SARS CoV-2).

Participant or population: Covid-19 related hypoxemic respiratory failure.

Intervention: Awake Prone Positioning.

Comparator: Usual care ie no prone position.

Study designs to be included: Prospective parallel groups controlled studies.

Eligibility criteria: To be eligible for inclusion, studies have to use a randomized controlled trial design, including hospitalized patients with hypoxemic respiratory failure due to Covid-19; compare awake prone positioning with usual care (no prone positioning); and report on endotracheal intubation.

Information sources: In MEDLINE, EMBASE, CINAHL, CENTRAL, and Science Citation Index; contact with authors; references of published studies.

Main outcome(s): Endotracheal intubation during the hospital stay.

Additional outcome(s): None.

Data management: We will review in duplicate the list of titles and abstracts, and evaluate the full texts of potentially eligible studies.

To be eligible for inclusion, studies have to use a randomized or quasi-randomized controlled trial design.

Abstracted data include study design, eligibility criteria, enrollment dates, number of centers, countries; study population (age, sex, body mass index, severity of hypoxemia, and type of care unit (eg, ward

or intensive care unit) at admission); oxygenation modality at baseline; descriptions of the study intervention in the control group, and study outcomes.

Quality assessment / Risk of bias analysis: Quality assessment will use the risk of bias version 2 of the Cochrane Risk-of-Bias too.

Strategy of data synthesis: We will focus on Awake Prone Position failure (the need for endotracheal intubation or death).

Effect estimates will be reported as relative risks with corresponding 95% confidence intervals.

We will use a random effects model. Studies with no events in both arms will not be considered.

Subgroup analysis: No subgroup analysis is planned.

Sensitivity analysis: Sensitivity analysis will rely on study removed technique to evaluate the impact of each study individually.

The association between the primary endpoint of endotracheal intubation and the severity of hypoxemic respiratory failure (SpO₂/FiO₂) will be assessed by meta-regression.

Language restriction: English.

Country(ies) involved: Tunisia.

Keywords: Prone Position, COVID-19, Hypoxaemic respiratory failure, ARDS, oxygenation, intubation rate, Mortality.

Dissemination plans: We plan to publish the results of this meta-analysis.

Contributions of each author:

Author 1 - Lamia Ouanes-Besbes - Will contribute to studies' selection, and data extraction.

Email: lamia.besbes@rns.tn

Author 2 - Zeineb Hammouda - Data extraction and risk of bias evaluation.

Email: zanoubia83@hotmail.com

Author 3 - Manel Lahmar - Data extraction and risk of bias evaluation.

Email: firassmal4@gmail.com