AB090. SOH21AS084. Awake prone positioning as treatment for respiratory distress: a systematic review

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Background: Coronavirus disease 2019 (COVID-19) pneumonia is an inflammatory acute lung injury presenting as refractory hypoxaemia and acute respiratory distress syndrome (ARDS). The conventional evidence-based treatment paradigm of ARDS had guided the initial globally adopted strategy of 'early intubation'. Subsequent studies discovered high mortality in intubated COVID-19 patients. This prompted a new approach to prevent or delay intubation in COVID-19 patients. One strategy involves prone positioning in awake patients to improve oxygenation and avoid intubation.

Methods: In May 2020, a systematic search was performed electronically on the subject of prone positioning in awake, non-intubated adult patients with respiratory distress. We searched EMBASE, CENTRAL and MEDLINE for randomised control trials or observational studies. There was no language or publication limitation imposed.

Results: After exclusions, three studies were included with a total of 85 patients. Two studies were prospective observational cohort studies and one was a retrospective cohort study. Awake prone positioning was found to improve oxygenation by increasing the median oxygen saturation ratio during proning. The manoeuvre is an effective adjunct to all non-invasive modes of respiratory support and was observed to be well tolerated, feasible and shows no immediate harm in awake patients with respiratory distress.

Conclusions: Although multiple benefits from awake prone positioning were observed from this review, the low amount of studies, lack of randomisation and lack of a standardized protocol for prone positioning prevents this review from making definitive recommendations regarding awake prone positioning. This highlights the need for further randomised control trials using standardised protocols to address this issue.

Keywords: Prone positioning; respiratory failure; acute lung injury; acute respiratory distress syndrome (ARDS); awake; conscious; non-intubated