



“AWAKE PRONING IN NON-INTUBATED COVID-19 PATIENTS”

Clinical Research

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ABSTRACT

Aims: To assess the impact of Proning on further need of Oxygen therapy in non-intubated COVID-19 patients.

Material and Methods: A total of 30 Covid-19 positive patients admitted in Covid ward & ICU of Swaroop Rani Nehru Hospital, Prayagraj , presented with acute hypoxemia , were included in this case series. All the admitted patients received treatment according to latest Covid-19 guidelines along with awake proning and were assessed regularly for their clinical course.

Results: Awake proning improves oxygenation and prevent requirement for intubation in patients with acute hypoxemic respiratory failure. allowed patients to improve without any oxygen support while some received oxygen therapy via Nasal Cannula or High Flow Nasal Cannula.

KEYWORDS

COVID-19; acute hypoxemia; Awake proning.

INTRODUCTION :

It has been a well established fact that Prone Positioning improves oxygenation by altering various physiological and mechanical characteristics of respiration . In same manner , Proning should also benefit awake , non-intubated patients with acute hypoxemia. However, Proning in awake patients was not commonly practiced until a few months ago when the Corona Virus Disease-2019 (COVID-19) pandemic surged.

Recently, number of sick patients have increased many folds and with rapidly rising cases of COVID-19, most of our hospitals are running at full capacity and still facing shortage of ventilators.

In addition, outcomes of patients placed on mechanical ventilation because of COVID-19 infection have been highly variable and often dismal⁽¹⁾.

Hence, focus is greatly getting shifted to using various strategies which can prevent deterioration in such patients and to prevent need for intubation.

Proning In awake patients (**awake proning**) is one of such technique . There is accumulating evidence that awake proning is a low-risk intervention that can be performed even outside intensive care unit with minimal assistance and may prevent intubation in certain patients. It can also be performed safely at smaller centers and, therefore, may reduce the need of patient transfer to higher institutions that are already overburdened in the current crisis.⁽²⁾

We present a case series of 30 Covid-19 positive patients admitted in Covid ward & ICU of Swaroop Rani Nehru Hospital, Prayagraj , presented with acute hypoxemia who experienced significant improvements in oxygenation with awake proning .

MATERIAL AND METHODS

A total of 30 Covid-19 positive patients admitted in Covid ward & ICU of Swaroop Rani Nehru Hospital, Prayagraj , presented with acute hypoxemia , were included in this case series.

INCLUSION CRITERIA:

- Patients tested covid 19 positive with rt-PCR.
- Patients with Oxygen requirement of > 4 Litres/minute.
- Normal mental status
- Patients able to self- prone with minimal assistance.

EXCLUSION CRITERIA:

- Patients with hemodynamic instability.
- Close monitoring not possible.

All the health care personnel were equipped with full Personal Protection Equipments(PPE). All the admitted patients received treatment according to latest Covid-19 guidelines . Proning was

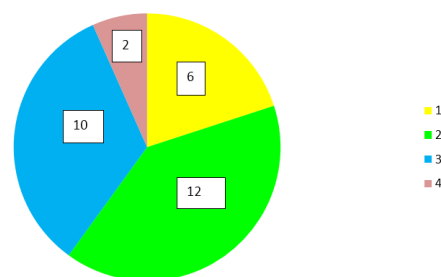
initiated along with proper counselling⁽³⁾. Proning was done for 30 – 120 minutes , followed by 30 – 120 minutes in left lateral decubitus position, right decubitus and then upright sitting position⁽⁴⁾. Patient was asked to lie prone while sleeping. According to patient's comfort this duration was adjusted⁽⁵⁾. Patients showing signs of anxiety were given Tab. Alprazolam 0.25 mg. Continuous monitoring of oxygen saturation was done using pulse oximeter and all patients were regularly monitored for any signs of deterioration. Those who required Oxygen therapy were given the same using either Nasal cannula (NC) or High flow Nasal cannula (HFNC). Those who did not show improvement or deteriorated even with HFNC were intubated and were put on Invasive Mechanical Ventilation with proper sedation.

Observations

Following observations were drawn from the study :

- 6 patients did not require any oxygen support and improved just by positioning of the patient.
- 12 patients required Oxygen support with Nasal Cannula (NC) and improved .
- 12 patients required Oxygen support with High Flow Nasal Cannula (HFNC)
- Out of those requiring HFNC, 10 patients improved with oxygen support and proning .
- Out of those requiring HFNC, only 2 patients needed Invasive Mechanical Ventilation.

Number of Patients



- 1- Patient who improved without oxygen support
- 2- Patient requiring Oxygen support with Nasal Cannula
- 3- Patient requiring Oxygen support with High Flow Nasal Cannula
- 4- Patient requiring Invasive Mechanical Ventilation .

RESULT

- Awake proning improves oxygenation and may allow the patient to improve without any oxygen support.
- Awake proning may prevent requirement for intubation in patients with acute hypoxemic respiratory failure.

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