



EFFECT OF NONINVASIVE VENTILATION ON INTUBATION RISK IN PREHOSPITAL PATIENTS WITH ACUTE CARDIOGENIC PULMONARY EDEMA: A RETROSPECTIVE STUDY

Emergency Medicine

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KEYWORDS

OBJECTIVE

The aim of this study was to assess the effect of prehospital noninvasive ventilation for acute cardiogenic pulmonary edema on endotracheal intubation rate and on ICU admission rate.

METHODS

This Study Carried out as a retrospective study on patients' came in Emergency Medicine Department and data Collected between January 2023 to December 2023 control period, and intervention period. Adult patients were included in this study with diagnosis of acute cardiogenic pulmonary edema. Exclusion criteria were based on Glasgow coma scale score less than 9 or any other respiratory ailments. We analyzed the association between noninvasive ventilation implementation and with endotracheal intubation. The outcome results were on invariable and multivariable regression models. The outcome result was analyzed on the basis of prehospital endotracheal intubation and noninvasive ventilation in acute cardiogenic pulmonary edema.

RESULTS

A total of 500 patients were included. Noninvasive ventilation availability was associated with a significant decrease in end tracheal intubation rate (2.6% in the control versus 0.7% in the intervention period), with an adjusted odds ratio (OR) of 0.3 [95% confidence interval (CI), 0.1–0.7]. There was a decrease in ICU admissions (18.6% in the control versus 13.0% in the intervention period) with an adjusted OR of 0.6 (95% CI, 0.5–0.9). There was no significant change in 30-day mortality (11.2% in the control versus 11.0% in the intervention period, $P=0.901$).

CONCLUSION

In this study noninvasive ventilation in acute cardiogenic edema patients shows the better outcome in compare to invasive ventilation of acute cardiogenic pulmonary edema patients noninvasive ventilation decrease both endotracheal intubation and ICU admission rates.

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