

BRIEF INFORMATION OF THIS THESIS

Thesis: “research on blood level of Brain Natriuretic Peptide (BNP) on patients with cardiogenic pulmonary edema treated ventilation noninvasive positive pressure”

Specialization: Internal - Cardiology

Code: 62 72 01 41

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Institution: Hue Medical University - the University of Hue

NEW FINDING OF THE THESIS

+ The clinical features, arterial blood gas and different levels of BNP

- Most patients are at the old aged, with equal proportion of men and women. More than half of the factors made patients to hospitalized due to exertion and dropout. 91.4% of patients hospitalized because of breathing difficulties. Patients with signs of acute respiratory failure on admission: tachycardia, (frequency: 120 times / minute), increased breathing rate (29 beats/minute), oxygen saturation decreased capillary blood ($SpO_2 = 83\%$). 71.4% of patients with hypertension. 21.4% of patients with arrhythmias. Patients with a history of hypertension accounted for the highest rate of 92%, 61.4% of coronary heart disease.

- Patients with cardiogenic pulmonary edema treated ventilation noninvasive after 6 hours have resumed a vital sign, blood gases and serum BNP levels ($p < 0.05$).

- Duration of mechanical ventilation, non-invasive positive pressure is an average of 12 hours and 58 minutes and the hospitalized duration is approximately 10.26 days.

+ The study results showed that factors predicting the likelihood of success in the treatment of cardiogenic pulmonary edema with mechanical ventilation noninvasive positive pressure:

- High concentrations of BNP before and after six hours with equally or more than 220 pg/mL helps predict the likelihood of success with 73.8% sensitivity, specificity of 72.22%, the area under the curve (AUC) = 0.801; $p = 0.0001$. BNP offset under 220pg / ml predicted failure, needing an invasive ventilator initiative.
- Comparing BNP levels at the start of mechanical ventilation with BNP concentration at six hours increased 1pg/ml, the risk of intubation decreased 1 times [OR = 0.998, 95% (from 0.997 to 0.999), $p = 0.001$].
- There is a correlation between the number of circuit elements and digital effects BNP with failure prognosis: patients with the same digital circuit, while effective at the start of BNP than 6 hours of mechanical ventilation increased to 1 pg/ml, the risk failure decreased 1 times, [OR = 1.0024, 95% CI (1.0005 to 1.0044), $p = 0.014$]. Patients with BNP offsets, the offsets beginning ventilator circuit than 6 hours increased to 10 beats, the possibility of failure decreased by 10.6 times [OR = 1.06, 95% CI (1.01 - 1.11), $p = 0.01$].
- Patients with cardiogenic pulmonary edema treated ventilation noninvasive positive pressure had 74.3% success rate.

Instructor:

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