

B-type Natriuretic Peptide and Outcome of Weaning from Mechanical Ventilation

Thesis Submitted by

Mahmoud Nashed Mahmoud Abdel Salam

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Supervisors

Khaled Abd El Wahab, MD

Assistant Prof. of Critical Care
Medicine

Faculty of Medicine

Cairo University

Mervat Khalaf, MD

Assistant Prof. of
Critical Care Medicine

Faculty of Medicine

Cairo University

Amal Rizk, MD

Professor of Chemical & Clinical Pathology

Critical care department,

Cairo University

Faculty of Medicine

Cairo University

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Abstract

prediction of weaning success remains a major clinical challenge. Cardiovascular dysfunction could be a major underlying mechanism of weaning failure. Recent data suggest that BNP; a marker for cardiovascular dysfunction, may predict the outcome of weaning from assisted mechanical ventilation ⁽¹⁾.

BNP variations during spontaneous breathing trial may be of predictive value concerning the outcome of weaning process ^(2a).

Complications of invasive mechanical ventilation increase with the duration of ventilator dependence (2b).

Patients should therefore be weaned from mechanical ventilation as quickly as possible. However, both delayed and premature weaning may be harmful so the need for accurate prediction of weaning outcome is therefore important.

So far, no reliable predictor of weaning failure has been identified while the patient is still under mechanical ventilation.

The pathophysiology underlying weaning failure is complex and the relative weight of the different factors involved not completely understood. Cardiac function and, more importantly, volume status may play a key role in this setting (1).

B-type natriuretic peptide (BNP) is a 32-amino acid protein that is released from the cardiac ventricles in response to myocyte stretch .

BNP is the most powerful hormonal predictor of left-ventricular dysfunction, and its plasma level has been correlated to left-ventricular filling pressure (1)

Key words

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