Introduction

Mechanical ventilation is the most widely used supportive technique in the intensive care units

Several forms of external support for respiration have long been described to assist the failing ventilatory pump ***(Peter et al., 2002)*** and access to lower airways through tracheostomy or endotracheal tubes had constituted a major advance in the management of patients with respiratory distress. ***(Lightlower et al., 2003)***

More recently, however new non-invasive ventilation (NIV) technique, using patient/ventilator interfaces in the form of facial mask, have been used. ***(Mehta, 2001)***

The reasons for promoting NIV include a better understanding of the role of ventilatorty pump failure in the indications for mechanical ventilation, the development of ventilatory modalities able to work in synchrony with the patients, and the extensive recognition of complications associated with endotracheal intubation and standard mechanical ventilation. **(*Hill et al., 2004)***

NIV has been used primarily for patients with acute hypercapnic ventilatory failure, and especially for acute exacerbation of chronic obstructive pulmonary diseases. ***(Brochard, 2003)***

In this population, the use of NIV is associated with a marked reduction in the need for endotracheal intubations, a decrease in complication rate, a reduced duration of hospital stay and a substantial reduction in hospital mortality. ***(Hill et al., 2004)***

Similar benefits have also been demonstrated in patients with asphyxic forms of acute cardiogenic pulmonary oedema. In patients with primarily hypoxemic forms of respiratory failure, the level of success of NIV is more variable , but major benefits have also been demonstrated in

selected populations with no contraindications such as multiple organ failure , loss of consciousness or hemodynamic instability. ***(Lightlower et al., 2003)***

One important factor in success seems to be early delivery of NIV during the course of the respiratory failure, non invasive ventilation allows many of complications associated with mechanical ventilation to be avoided especially the occurrance of nosocomial infections. ***(Mehta, 2001)***

The current use of NIV is growing up and is becoming a major therapeutic tool in the intensive care unit. ***(Hill et al., 2004)***