

MINI-TRACHEOTOMY : A REVIEW OF 68 CASES

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Prolonged intubation affects laryngeal competence after extubation (1). The incidence and consequences of this complication may be increased in unconscious patients with poor chest physiotherapy. In this context, the purpose of this study was to test the effectiveness of cricothyroidotomy in the prevention of pulmonary aspiration syndrome and sputum retention, and to verify long range tolerance of the cannula.

Methods : The PORTEX Mini TRACH II kit was used for bronchial suctioning after prolonged intubation (mean = 20 days, range = 3-51 days) in 68 comatose (Neurosurgery) patients (mean age = 45, range = 15-80 yrs ; 56 males and 12 females). We used for insertion the technique recommended by the manufacturer, but extubation was performed two hours after cannulation. The cannula was left in place for a mean duration of 20 days (range 2-240 days). The laryngeal lumen was checked in 51 cases by naso-tracheal fibroscopy and soft-tissue X-rays of the neck (mean delay of 8 months ; range = 1-24 months). Twelve patients died after hospital discharge, and 3 were lost for follow-up.

Results : 66 easy insertions ; 2 failures due to impossible cannulation (intercricothyroid space too

narrow). In 6 cases iterative sputum retention required reintubation and mechanical ventilation. Cannula tolerance was excellent, allowing deglutition and phonation, and giving optimal conditions for vocal cord function after prolonged intubation. No abnormalities were detected after long term follow-up.

Conclusion : the PORTEX kit allows effective bronchial aspiration in 60 cases (88 %). Long term tolerance was excellent in all of the patients during follow-up (100 %). Cannula size was too large in 2 cases (3 %). Keeping the endotracheal cuffed tube in place during cannulation offers good protection of the upper airways in case of accidental hemorrhage.

References :

1. Anesthesiology, 1979, 51: 73-77.

TITLE: LEFT VENTRICULAR EJECTION FRACTION AND COMPLIANCE IN PATIENTS WITH CARDIORESPIRATORY FAILURE WITH AND WITHOUT SEPTIC SHOCK.

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Acute dilatation of the left ventricle and reduced ejection fraction (EF) have been observed in patients, who survived septic shock. This has been interpreted as an important adaptive mechanism for compensation of a reduced myocardial contractility due to septic shock, since patients without an increased enddiastolic volume and normal EF died (1). We investigated whether leftventricular end-diastolic area (LVEDA-I), compliance and EF differs between patients with septic shock and patients with cardiovascular failure without sepsis.

20 operative intensive-care patients requiring respiratory and inotropic support due to sepsis (12 patients, 8 of them died) or acute respiratory failure (8 patients) were investigated after informed consent and approval by our local research committee. Echocardiographic and hemodynamic profiles were recorded simultaneously at the following study stages: 1=baseline measurement, 2=after infusion of 4ml/kg body weight of a hypertonic saline (7.5% NaCl in 6% hydroxyethyl starch, HTS) in 15 minutes, 3, 4, and 5 = 30, 60, and 90 minutes after volume loading using a transesophageal probe(TEE) and a Swan-Ganz catheter (PAC). We calculated the cardiac index (CI) by both thermodilution and pulsed wave profiles at the mitral valve and measured the left ventricular end-diastolic and end-systolic area index (LVEDA-I, LVESA-I) and ejection fraction (EF = LVEDA-LVESA/LVEDA) by TEE and the pulmonary capillary wedge pressure (PCWP) and systemic vascular resistance (SVR) by PAC.

No significant difference was found in the baseline measurement of CI, CVP, PCWP, SVR, LVEDA-I or EF between nonseptic patients, septic survivors and septic nonsurvivors. Immediately after volume loading, PCWP, LVEDA-I (Fig.) and CI rose significantly, whereas SVR decreased in all three groups. During study stages 3 to 5, we found a more elevated LVEDA-I in survivors of sepsis than in nonsurvivors despite a normalisation of PCWP and SVR.

Our data do not confirm the findings of Parker et al.(1), that EF and EDV differ between survivors and nonsurvivors of sepsis. However, the increase in LVEDA-I in the survivors of sepsis under volume loading, which was in the same range we observed in nonseptic patients, indicates a higher compliance of the cardiovascular system.

REFERENCES:

1. Ann INT MED 100: 483-490, 1984

