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Outcome of Griggs' tracheostomy

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Comments

There is an impressive amount of data in this case-series. The authors have included consecutive patients, including those during the learning phase. The high overall complication rate of 16% is explained by 15 patients who had a difficult cannulation, so overall, complication rates are similar to those for the Ciaglia technique. The large number of neurosurgical patients in the series explains the authors' desire to avoid bronchoscopy in most patients. However, with careful airway management, attention to ventilator settings and rapid bronchoscopy to check guide-wire position only, a rise in pCO₂ should be avoidable. The large number of patients who developed hypoxia may represent poor patient selection or poor airway management. In the UK it is universal practice for a medically qualified anaesthetist to manage the airway. If in addition, tracheostomy is only performed once FiO₂ is below 0.6 and positive end-expiratory pressure (PEEP) below 10 cm H₂O, then hypoxia is rarely seen. It is a pity that the authors do not define the extent of tracheal stenosis, and that they did not wait until 6 months for tracheoscopy (some stenoses may form between 3 and 6 months). Finally I would warn against describing the technique as easy. Although percutaneous tracheostomy is technically easy to learn, patient selection, airway management, judgements about when to abort the procedure, and the severity and potential rapidity of potential complications mean that it should never be underestimated.

Introduction

There is relatively little data concerning complications of the Griggs single forceps percutaneous tracheostomy.

Aims

To investigate the complication rate and long-term outcome of the Griggs single forceps percutaneous tracheostomy.

Methods

This was a prospective observational study of 162 patients over 3 years. All patients meeting the entry criteria were included. Acute complications were recorded and, 3 months after decannulation, endoscopic examination of the upper airway was performed in 73 patients. Endoscopic guidance was used in 21 patients with difficult anatomy.

Results

The mean time for completion of the procedure was 560 seconds. Twenty-seven patients had perioperative complications, including two with major haemorrhage and one with surgical emphysema. Sixteen patients had postoperative complications, including five with pneumothoraces, one major haemorrhage and four with stomal infections. Forty-one patients developed hypoxia. There were two deaths related to delayed bilateral tension pneumothoraces. Endoscopy was performed on 73 patients, of whom 62 were normal, 7 had granulation tissue, and 4 had tracheal stenosis, of which 2 were symptomatic.

Discussion

Although the overall complication rate of 16.6% was high, this may have been due to the stringent definitions employed and the inclusion of patients during the learning phase. Twenty-five percent of patients developed hypoxia and methods of avoiding this (eg the use of an experienced respiratory therapist) are discussed. The risk of early inadvertent decannulation is highlighted. Arguments for and against endoscopic guidance are presented. The authors conclude that Griggs tracheostomy is an easy technique and call for further studies addressing long-term complications.

References

1. Escarment J, Suppini A, Sallaberry M, Kaiser E, Cantais E, Palmier B, Quinot JF: Percutaneous tracheostomy by forceps dilation: report of 162 cases. *Anaesthesia*. 2000, 55: 125-130.