Tracheostomy management in ordinary wards

Siobhan Heafield, Maria Rogers, Amod Karnik

Tracheostomy is more commonplace, particularly since the introduction of percutaneous techniques performed at the patient's bedside in the intensive care unit. Subsequent care and management within ordinary wards causes anxiety among staff. This review identifies some of the problems encountered and discusses their potential management.

Tracheostomy is one of the earliest surgical techniques, described by Asclepides the Greek physician circa 100BC (Grover and Bihari, 1992). It was regarded as a hazardous procedure until the indications and technique were clearly described by the Arab surgeon Albucasis in his book 'Surgery and Instruments' in 1000AD. The procedure itself is now considered to be very safe, but there is still a measurable late morbidity and mortality from complications associated with sub-optimal airway management.

PERCUTANEOUS TRACHEOSTOMY

The introduction of percutaneous tracheostomy techniques, which allows the procedure to be performed by non-surgical practitioners in the intensive care unit, seems to be associated with a substantial increase in the frequency of tracheostomy.

Manufacturers report an increase in tracheostomy tube sales of around 30% (JW Freeman, medical advisor, Mallinckrodt Medical, personal communication, 1998). It is therefore likely that, with pressure on intensive care unit beds for rapid throughput, an increasing number of patients will be discharged to the ordinary wards with a tracheostomy, where they may receive infrequent and inexpert attention from staff unaccustomed to managing tracheostomy tubes and preventing complications. This situation needs to be addressed urgently by clinical risk management strategies.

PERCUTANEOUS DILATATIONAL TRACHEOSTOMY

Percutaneous dilatational tracheostomy is a bedside procedure performed in the intensive care unit, thus reducing time wasted in obtaining a slot in theatre and the risks involved in transporting critically ill patients out of the intensive care unit. The incidence of complications like bleeding and infection have been shown to be lower than an open surgical technique (Soni, 1997), and the procedure is cheaper and quicker to perform.

The increased patient comfort and tolerance achieved by a tracheostomy leads to a reduced need for sedation and may contribute to quicker weaning from mechanical ventilatory support, thus potentially reducing the length of stay in the intensive care unit (D'Amelio et al, 1994).

Percutaneous dilatational techniques achieve a tracheostomy tract using different dilators. The stoma is usually smaller than that formed by a surgical method, hence heals faster and with less scarring. However, in the event of tube dislodgment or blockage, the small stoma may not allow the passage of another tracheostomy tube and the airway may therefore need to be secured using an oral-tracheal tube.

WHO NURSES PATIENTS WITH TRACHEOSTOMIES?

Historically, patients with tracheostomies were most often nursed within specialist clinical areas, either intensive care units or ear, nose and throat departments. The increasing use of the percutaneous techniques now means that this is no longer the case. Increasingly, both nursing and medical staff are required to provide safe care to patients with tracheostomies in ordinary wards.

However, research suggests that there is a distinct deficit in knowledge of tracheostomy care among practitioners in ordinary wards

Mrs Siobhan Heafield is Professional Development Sister Intensive Care Units, and **Dr Amod Karnik** is Research Fellow in Intensive Care Medicine in the Directorate of Anaesthetics and Intensive Care, and **Ms Maria Rogers** is Sister in the Directorate of ENT, Head, Neck and Maxillofacial Surgery, University Hospital Birmingham NHS Trust

Correspondence to: Mrs S Heafield, General Intensive Care Unit, Queen Elizabeth Hospital, Birmingham B15 2TH

(Tanser and Walker, 1997), including basic elements of care such as suction, humidification, knowledge of different tracheostomy tubes, and the needs of both patients and their carers.

It has now become common practice for ward staff to seek advice from the specialist areas to assist in care. This often includes dealing with incidents which may have been potentially life-threatening. The staff from specialist areas are also called upon to provide support and education regarding the use of equipment, discharge planning and psychological support to patients and their carers.

Audit within the authors' trust (unpublished data, 1997) has supported these findings and identified that patients are being cared for by practitioners who may not be adequately experienced or educated in looking after patients with tracheostomies. Hence patients outside the specialist areas are exposed to very serious risks. It is very likely that these findings would be representative of many other UK hospitals. This clearly has implications for clinical risk management within any trust.

DEVELOPING COMMON POLICIES

Problems reported in the authors' trust resulted in the setting up of a working group from the intensive care unit and ear, nose and throat department to develop a safe and common standard of care to all patients with a tracheostomy. This resulted in a trust-wide policy based on two fundamental principles. The first was that the team that performed the initial procedure must provide continuing medical care. This had obvious implications for the staff of the intensive care unit.

The second was the support and education for all staff including equipment, emergency procedures, care planning and tube changes. Appropriate information and equipment contained in an identifiable 'tracheostomy safety box' now accompanies each patient when discharged from the intensive care unit. Educational needs have been supported by the production of a printed *Educational Guide to Tracheostomy Care** and the establishment of a link group across the trust. It has been recommended that tracheostomy management be included in the local undergraduate curriculum.

CONCLUSIONS

The perceived benefits driving the trend toward more frequent use of tracheostomies in intensive care may not be realized fully if they are offset by an increased rate of tracheostomy-associated complications following discharge to the ward. For this reason medical and nursing staff who care for patients with tracheostomies in specialist areas must play an active role in the education and training of their less experienced colleagues in general wards. Trusts who do not have in place a policy for tracheostomy management may be exposing their patients to serious risks and themselves to potential litigation. HM

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*Interested readers may obtain more information about this guide from the corresponding author.

KEY POINTS

- Increasing number of tracheostomies are being performed in intensive care units.
- Medical and nursing staff on ordinary wards are expected to look after an increasing number of tracheostomies.
- There is a deficit in knowledge and training in tracheostomy care among medical and nursing staff.
- When complications do occur they may be potentially life threatening.
- Adoption of local guidelines/policies developed between ear, nose and throat and intensive care departments can ensure safe standards of care.