Austin Health

CLINICAL GUIDELINE

TRACHEOSTOMY RELATED BLEEDING

Staff this document applies to:

Medical staff, Nursing, Physiotherapists and Speech Pathologists on all Austin Health sites

State any related Austin Health policies, procedures or guidelines:

Mandatory Tracheostomy Equipment & Emergency Tracheostomy Management Poster

Suctioning via the tracheostomy

Tracheostomy Stoma Care

Initiating a MET Call response

Medical emergency review (MER) call

Management of patients with a Tracheostomy

Austin Hospital Escalation Response to Clinical Deterioration

Background:

Tracheostomy is a common procedure involving the placement of an artificial subglottic airway. It may be performed for a variety of reasons, including as part of the management of head & neck cancers, respiratory failure or neurological problems. While serious bleeding from a tracheostomy site is relatively rare, there are occasions where life-threatening erosion into a major vessel can occur. This document is intended to guide the approach to assessing and managing patients with tracheostomy related bleeding so that this problem may be recognised and managed in a timely manner.

Categorising Tracheostomy Related Bleeding:

The potential causes for tracheostomy related bleeding depend very much on the time that has passed since the formation of stoma and tracheostomy tube inserted.

Early bleeding (<4 days)

- Skin related bleeding
- Thyroid related bleeding
- Related to anticoagulant or antiplatelet therapy

Late bleeding (>4) days)

- Erosion into a large artery (e.g. tracheo-innominate fistula)
- Granulation tissue
- Mucosal trauma from suction catheters etc

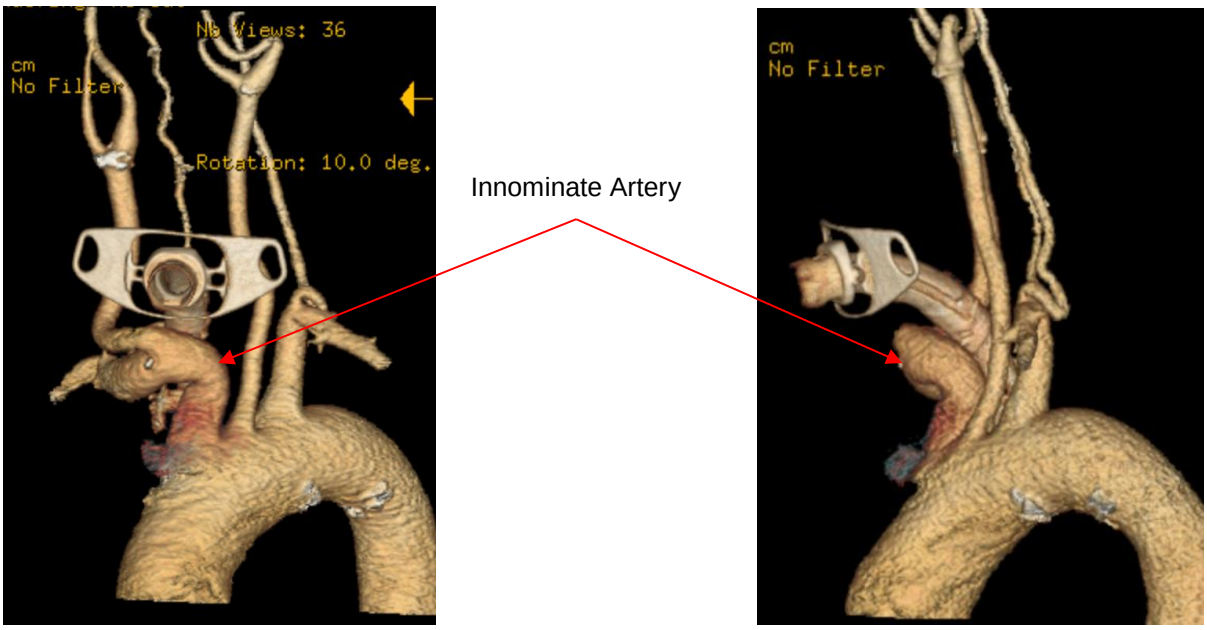
Clinical Alert

- All bleeding from a tracheostomy site is potentially serious.

- An experienced clinician should be involved in evaluation at an early stage in all cases.
- The specialist surgeon or intensivist who inserted the tracheostomy should be consulted immediately and provide advice.
- A pulsating tracheostomy tube may indicate close proximity to a large vessel, which in itself is a risk factor for a major haemorrhage. This constitutes an emergency the first time it is detected and an experienced clinician should be involved in evaluation at an early stage in all cases. The specialist surgeon or intensivist who inserted the tracheostomy should be consulted immediately and provide advice.
- The home team must be notified of the bleed and appropriately direct action for management and or investigation.

Rationale and Key Points:

- Small volume bleeding at a tracheostomy stoma may herald a major haemorrhage and the treating clinician must always thoroughly evaluate for the possibility of a trachea-arterial fistula. Please activate the 'urgent clinical review' process
- Tracheo-innominate artery erosion is a rare late complication associated with high mortality rate. Erosion occurs in less than 1% of tracheostomy cases and is usually associated with:
    - a) low placement of tracheostomy tube
    - b) excessive movement of the TT
    - c) over inflation of cuff; and/or
    - d) suboptimal tracheostomy tube position



Procedure:

Recommended action:

- Inflate cuff
- Sit the patient up
- Administer supplemental oxygen
- Measure vital signs

- If < 10mls of bright blood (e.g. blood contained within dressing) activate 'Urgent Clinical Review'
- If > 10mls of bright blood or actively bleeding (e.g. stoma dressing soaked and blood leaking beyond dressing), activate CODE BLUE.
- If major bleeding and/or associated hypoxaemia or respiratory distress, activate CODE BLUE
- Notify the surgeon responsible for the insertion of the tracheostomy

For major arterial erosion consider following:

- **Hyper-inflation** of the tracheostomy **cuff** and/or
- **Direct digital compression** of the bleeding point.
- In these circumstances, the patient must have their airway secured by a clinician with advanced airway skills and be transferred to the operating room or interventional radiology suite for further evaluation and intervention. Planning for further investigations and interventions will be at the direction of the treating thoracic, ENT surgeon or Maxillofacial Surgeon involved.
- Ensure adequate wide-bore iv access

Post Procedure

- If cuff is inflated, do not deflate cuff until expert clinical assistance is available as it is possible the inflated cuff is tamponading the blood vessel.
- Contact TRAMS by phone extension 3095 or on pager 1291 to report the event. TRAMS will review at the earliest possible opportunity (with the exception of acute ENT or ICU patients which are not managed by TRAMS)

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Legislation/References/Supporting Documents:

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