Guideline for Emergency Department Surgical Airway (Adults)

This Guideline is in accordance with the National Trauma Peer Review Measures -
ODN T14-1C-111  TU T14-2B-310  MTC T14-2B-116
<table>
<thead>
<tr>
<th>Purpose of Document</th>
<th>This document has been produced in accordance with the National Trauma Peer Review Measure - the South Yorkshire Major Trauma ODN should have in place Network agreed Clinical Guidelines for the management of Adult Emergency Surgical Airway.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Action</td>
<td>All relevant staff should ensure they are fully aware of, and operate in line with the up-to-date guidance. Service Clinical Leads should ensure their MDTs are familiar with the guidance and act in accordance.</td>
</tr>
<tr>
<td>Action Required by/Audience</td>
<td>Sheffield Teaching Hospitals NHFT Adult MTC Trauma Lead TU Trauma Leads (Barnsley, Chesterfield, Doncaster, Rotherham) MTC and TU Emergency Department Staff (Barnsley, Chesterfield, Doncaster, Rotherham, Northern General Hospital, Sheffield)</td>
</tr>
<tr>
<td>Circulation</td>
<td>Trusts Chief Executives Trusts Medical Directors Trusts Directors of Operations Trusts General Managers responsible for Trauma Services Operational Delivery Networks’ Strategy Board South Yorkshire Clinical Audit and Advisory Group (Pre-hospital/RESUS/Acute)</td>
</tr>
<tr>
<td>Authors</td>
<td>Neil Sambridge – Consultant Anaesthetist Sheffield Teaching Hospitals NHSFT</td>
</tr>
<tr>
<td>Date agreed by SY MT ODN CAAG</td>
<td>04 Dec 2015</td>
</tr>
<tr>
<td>Date Signed off by ODNs' Board</td>
<td>28 Jan 2016</td>
</tr>
<tr>
<td>Policy Review Date</td>
<td>Apr 2017 (or sooner if national policy requires)</td>
</tr>
</tbody>
</table>

Please note that from Jun 2017 all ODN Clinical Guidelines, Protocols and Policies will be available on the ODN website for downloading.
Guideline for Emergency Department Surgical Airway for Adults

Background

Surgical transcricothyroid access to the trachea is the preferred option for major trauma patients following failed airway management and/or can’t intubate - can’t ventilate situations. It is recommended by national guidelines including the Difficult Airway Society (supported by the Royal College of Anaesthetists).

Alternatives to a surgical airway are rarely useful in the major trauma patient and have a higher rate of failure and complications. Therefore needle cricothyroid access and the use of commercial transcricothyroid kits should be avoided.

Indications

The decision to proceed to a surgical airway should be made early and before the patient is profoundly hypoxic and peri arrest.

Primary surgical airway may be indicated in patients with significant maxillo-facial trauma and/or burns for example. However, oral intubation is often easy (despite the anatomical appearance and blood) in patients with maxillo-facial trauma – the simultaneous use of two rigid suction catheters to rapidly clear blood is recommended.

Secondary surgical airway is indicated after induction of anaesthesia and subsequent failed intubation and ventilation as per the DAS guidelines. In the severely injured patient the option to wake the patient up may not be possible (agitated hypoxic head injury, multiple injuries requiring lifesaving surgical interventions for example).

Equipment

STH Surgical Airway Pack containing:

- Tracheal dilators
- Tracheal hook
- Scalpel (small size 15) – use a larger scalpel not this one
- Scalpel (large size 22) – use this size scalpel and not the one in the pack
- Endotracheal tube 6.5
- Bougie

Technique

This should ideally be performed by two operators - this ensures that once a hole is made through the cricothyroid membrane it is not subsequently lost.
Bleeding is common and can be managed with direct pressure and/or sutures after the airway is secured.

A single transverse stab incision is appropriate for most patients. In a minority of patients with difficult anatomy (obese, short neck, burns for example) it may be necessary to perform a midline vertical incision and dissect down to find the cricothyroid membrane and then perform a transverse stab incision.