Amputation SOP

QPI

Further reading

http://dx.doi.org/10.1136/emj.2009.074500
http://dx.doi.org/10.1136/emermed-2015-204881
NICE NG37 Complex fractures 2016

Related SOPs

Extrication SOP	Open Fracture SOP	Haemostasis SOP	Blood Transfusion (BoB) SOP

This SOP provides guidance on the management of 3 possible scenarios:

1. Complete traumatic amputation
2. Partial traumatic amputation
3. Deliberate emergency amputation

In all cases, treatment should follow the cABC paradigm

Patients with partial or complete amputation proximal to the wrist or mid-foot should be triaged to a **major trauma centre**

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Complete traumatic amputation

To be completed as required:

<C>

- Haemorrhage control with direct pressure and elevation
- Proximal pressure on feeding artery (eg. femoral)
- Haemostatic gauze packing
- Tourniquet x2
- Pressure bandage

A

- Managed appropriately according to GCS and humanitarian requirements
- Ketamine analgesia/sedation with non-invasive capnography
- PHEA often best delayed until hypovolaemia addressed

B

- Assess and manage depending on associated injuries
- Oxygen therapy as required

C

- Full assessment
- Early vascular access and tranexamic acid
- FFP/Red cells as per **Blood Transfusion (BoB) SOP**
- Calcium
- Cefotaxime
- Protect stump in a splint and also transport amputated limb

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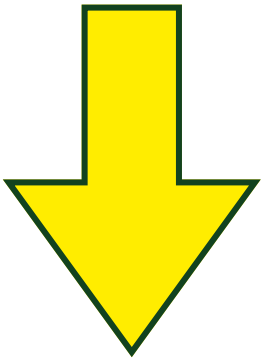
Partial traumatic amputation



<C>ABC as above

Manage as per **Open Fracture SOP**, including a full assessment of distal neurovascular status

Straighten limb and splint in neutral position

Inappropriate to complete the amputation unless absolutely necessary for patient safety

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Deliberate emergency amputation

Possible scenarios:

- Trapped patient with immediate scene-safety risk to life
- Trapped patient with rapidly deteriorating physiology and highly likely to arrest during the time taken to effect a standard extrication
- To extricate a patient who is absolutely trapped by a non-viable limb when all other options have failed
- Amputation of a limb on a deceased person to permit access to a live casualty where no other option is available

Considerations:

- Multidisciplinary approach including HART / Fire & Rescue
- Consider activation of second aircraft if time allows (blood products, second opinion)
- Seek second doctor opinion via telephone if possible
- **Avoid** in trapped patients who are asystolic, due to futility

Technique:

<C>ABC management as above

Full explanation to team and patient as appropriate

Personal protective equipment including eye protection

Ketamine analgesia/sedation with non-invasive capnography and oxygen as required

Proximal tourniquet x2

Clean area with betadine

Use a scalpel to cut through most distal level in a circumferential technique to expose bone

Use a Gigli saw to cut through bone, keeping hands wide apart to maintain a straight blade

Clamps or ligatures may be required for ongoing bleeding from large vessels

Approximate wound edges as much as possible and apply gauze and bandage to stump

Cefotaxime 2g (50mg/kg in children)

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Using Fire & Rescue cutting equipment

Specific training has been delivered to GNAAS clinicians on the use of Fire Service cutting equipment. Decision-making needs to take into account factors such as the speed needed, presence of fire service support and level of physical access to the limb.

GNAAS clinician should operate the tools in this setting

Clean cut of soft tissues and bone

Requires good access to limb

Relatively slow

Fastest technique

Clean cut

Significant spray and aerosolisation of blood and tissue so **not recommended**

Clean cut of soft tissues and bone

Requires good access to limb

Relatively slow unless already set up

HEMS team only

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