11.04 SPECIAL CIRCUMSTANCES FIELD AMPUTATION

BLS Treatment

- If crush injury, refer to **Protocol 11.02 Crush Syndrome**.
- Request Amputation Team (minimum 3-person procedure, see Base Hospital Contact Criteria) consider the following indications in a patient with an entrapped limb:
  - Scene safety posing an immediate risk to patient's life.
  - Patient decompensation with death likely to occur before extrication.
  - Minimal attachment or severe mutilation of non-survivable limb.
  - Deceased body is blocking access to a potentially live patient.
- Clear access to chest, head and as far distally on entrapped extremity as possible.
- Assess circulation, airway, breathing, and responsiveness.
- As indicated: **Oxygen,** Spinal Motion Restriction**,** position of comfort, splint suspected fractures/instability
- Bandage wounds/control bleeding as indicated, refer to Protocol 4.05 Extremity Bleeding Control

ALS Treatment

- IV or IO of **Normal Saline** TKO.
- If SBP <90, administer **Normal Saline** fluid bolus
- For pain: may administer **Fentanyl** and **Ketamine**
- Attempt to obtain a full set of vitals and place patient on monitor as able.
- Maintain visualization and verbal communication with patient for close monitoring.
- Expose extremity as much as possible. Assist amputation team during procedure, as needed.
- Transport amputated limb with patient to hospital following procedure.
  - Wash amputated limb with Normal Saline to remove contaminants.
  - Wrap amputated limb in moistened gauze.
  - Place wrapped amputated limb in a dry plastic bag.
  - Place bag with amputated limb in a separate bag filled with ice.
  - Do not place amputated limb directly onto ice.

Comments

- Do not delay life-saving patient care to perform interventions.
- Rapid transport of the post-amputation patient to a trauma center is critical.

Paramedic may assist with field amputation. Performing amputation/procedural sedation is not in the current paramedic scope of practice and sedation medications may only be administered by physicians or nurses in the field.

Amputation Team Guidelines (Physicians ONLY)

- Patient consent.
- Document scene
- Assign additional roles prior to amputation:
  - Movement of patient to a designated pit stop following amputation.

- Hemorrhage control and dressing of stump.
- Ambulance and transport EMS crew.
- Primary survey and resuscitation.

- Prep extremity.
- Establish IV access, 2 IVs if possible.
- Establish proximal and distal control, if possible.
- Maintain clean, if not sterile, technique.
- Sedation: Preferred medication is **Midazolam.**
- Anesthesia: Preferred medications is **Ketamine** for prolonged procedure.
- Provide pain control: Preferred medication is **Fentanyl.**
- Perform amputation using scalpel, cable saw and extremity tourniquet, as available.
- Reassess patient and initiate resuscitation efforts.
- Accompany patient during transport to hospital.

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- Equipment list for amputation: (should be kept in a "go bag" accessible for rapid transport with team) EQUIPMENT NEEDS: O.R. amputation pack with:
  - Cable saw
  - Scalpel with # 10 blade
  - Scalpel with # 15 blade
  - Pneumatic tourniquet(s)
  - Non-pneumatic tourniquet(s)
  - Gauze
  - Kerlex
  - Betadine and betadine applicators
  - Needle driver
  - Tissue forceps, long and short
  - 4-0 Ethilon suture material on a curved needle
  - Bone wax
  - Coagulation dressing material
  - **Fentanyl** 500 micrograms
  - **Midazolam** 20 milligrams
  - **Ketamine** 1000 milligrams
  - Syringes assorted sizes
  - Needles assorted sizes

Training requirements of Amputation Team:

- All personnel: Current licensure and credentialing at hospital of origin.
- Operator: A designated Emergency Medicine Physician with field amputation training. If available and by request, a General Surgeon or Orthopedist (with O.R. privileges).
- Assistant Operator: Anesthesiologist or Emergency Physician (with sedation privileges).
- Second Assistant: Operating Room technician, Emergency Department nurse, ~~or~~ Emergency Department technician, or paramedic on scene.
- Documentation of field amputation on prehospital Patient Care Record.
- Sentinel Event: 100% review by Trauma System Audit Committee and Hospital Process Improvement Committee.

Base Hospital Contact Criteria

- Team activation: Requested by scene commander; dispatched by request through Department of Emergency Communications to Base Hospital Physician.