

## *Michigan* TRAUMA AND ENVIRONMENTAL SOFT TISSUE AND ORTHOPEDIC INJURIES

Initial Date: 5/31/2012 Revised Date: 08/11/2023

Section 2-5

## Soft Tissue & Orthopedic Injuries

- 1. Follow General Pre-hospital Care Protocol.
- Pediatric patients (< 14 years of age) utilize MI MEDIC cards for appropriate medication dosage. When unavailable utilize pediatric dosing listed within protocol.
- 3. Control bleeding (refer to Bleeding Control (BCON)- Procedure Protocol)
  - A. Utilize direct pressure.
  - B. Consider early tourniquet use (refer to **Tourniquet Application-Procedure Protocol**).
  - C. Consider MCA approved hemostatic agents and hemorrhage control devices.
  - D. Consider use of pressure dressings with deep wound packing.
  - E. Consider pelvic binding for suspected unstable pelvic fracture.
- 4. For uncontrolled bleeding with hemorrhagic shock see **Hemorrhagic Shock-Treatment Protocol**
- 5. If appropriate, maintain spinal precautions for patient per **Spinal Injury Assessment-Treatment Protocol.**
- 6. Assess pain on 1-10 scale and treat per **Pain Management-Procedure Protocol**.
- 7. Immobilize/splint orthopedic injuries as appropriate.
  - A. Special Considerations
    - i. Consider traction splinting for closed femur fractures (excluding hip/femoral neck).
    - ii. Straighten severely angulated fractures if distal extremity has signs of decreased perfusion.
    - iii. Evaluate and document neurovascular status before and after splinting.
- 8. Partial/complete amputations, major soft tissue injuries (e.g., mangled extremity) and open fractures.
  - A. Control bleeding as above
  - B. Cover wounds with sterile dressings moistened with sterile solution.
  - C. Splint extremity.
  - D. Recoverable amputated parts should be brought to hospital as soon as possible.
  - E. Wrap amputated part in sterile dressing moistened with sterile solution. Seal in a plastic bag and, if available, place bag in container of ice and water. DO NOT place part directly on ice.
  - S F. Obtain IV access per Vascular Access and IV Therapy-Procedure Protocol.
  - G. Administer antibiotics (per MCA selection).



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MCA Selection for Antibiotics
□ No antibiotic selection
<ul> <li>Ceftriaxone Slow IV Push: 2gm diluted with 20ml NS</li> <li>1. Adult: 2 gm (diluted) slow IVP 3-5 min</li> <li>2. Pediatrics &gt; 2 months of age:         <ul> <li>a. Administer diluted dose according to MI MEDIC cards.</li> <li>b. If MI MEDIC cards are not available, administer 50 mg/kg (diluted) slow IVP 3-5 min (Maximum dose 2 gm)</li> </ul> </li> </ul>
<ul> <li>Ceftriaxone Infusion: Diluted dose added to 100 mL NS bag</li> <li>1. Adult: 2 gm (diluted) added to 100 mL NS bag. Infuse over 15-30 min</li> <li>Pediatrics ≥ 7 years of age:         <ul> <li>a. Ceftriaxone Infusion according to MI MEDIC cards</li> <li>b. If MI MEDIC cards are not available, add 50 mg/kg (diluted) to 100 mL NS bag. Max dose 2 gm. Infuse over 15-30</li> </ul> </li> </ul>
<ul> <li>Cefazolin Slow IV Push: 2 gm diluted with 20 ml or NS,</li> <li>1. Adults: 2 gm (diluted) slow IVP 3-5 min</li> <li>2. Pediatrics:         <ul> <li>a. Administer diluted dose according to MI MEDIC cards.</li> <li>b. If MI MEDIC cards are not available, administer 30 mg/kg (diluted) slow IVP 3-5 min (Maximum dose 2 gm)</li> </ul> </li> </ul>
<ul> <li>□ Cefazolin Infusion. Diluted dose added to 100 mL NS bag</li> <li>1. Adult: 2 gm (diluted), added to 100 mL bag of NS. Infuse over 15-30 minutes.</li> <li>2. Pediatrics ≥ 7 years of age:         <ul> <li>a. Cefazolin Infusion according to MI MEDIC cards.</li> <li>b. If MI MEDIC cards are not available, add 30 mg/kg (diluted) to 100 mL NS bag. Max dose 2 gm. Infuse over 15- 30 minutes.</li> </ul> </li> </ul>

- H. Frequent monitoring of circulation, sensation, and motion distal to the injury during transport.
- 9. For severe crush injuries, refer to General Crush Injury-Treatment Protocol.
- 10. Impaled objects are left in place and stabilized. Removal of impaled objects is only with approval of Medical Control.
- (11. Follow MCA transport protocol.
  - <sup>7</sup> 12. Provide pain management per **Pain Management-Procedure Protocol.**

Medication Protocols Cefazolin Ceftriaxone MCA Name: MCA Board Approval Date:

MCA Implementation Date: MDHHS Approved: 8/11/23