

# SAN FRANCISCO EMERGENCY MEDICAL SERVICES AGENCY

Effective: 01/01/11  
Supersedes: 09/01/06

Protocol: P-032

## CHEST AND ABDOMINAL TRAUMA

### SUBJECTIVE FINDINGS

- Mechanism of injury.
- Patient complaints: chest discomfort, respiratory distress, neck discomfort, abdominal pain.
- Past medical history: particularly cardiovascular and respiratory problems, medications, and possibility of pregnancy.

### OBJECTIVE FINDINGS

- Wounds, bruising, paradoxical chest wall movement, rib cage/sternal and pelvic stability, crepitus, areas of tenderness, abdominal rigidity and guarding.
- Neck veins, tracheal position, air leaks, breath sounds, heart sounds, pulse pressure, oxygen saturation, skin signs, cardiac rhythm, blood pressures in both arms.

| BLS Treatment  | ALS Treatment  |
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| <ul style="list-style-type: none"><li>• High flow oxygen 10-15 L/min, assist ventilations with BVM and 100% oxygen as needed</li><li>• Control external bleeding with direct pressure</li><li>• For open chest wound with air leak, occlusive dressing taped on 3 sides</li><li>• Cover evisceration with moist saline gauze to prevent further contamination or drying</li><li>• Immobilize impaled objects in place to prevent further movement</li><li>• RMC</li><li>• If pregnant &gt; 5 months gestation, place in the left lateral position; if transporting with full C-Spine precautions, tilt the spine board to the left</li></ul> | <ul style="list-style-type: none"><li>• Advanced airway as indicated</li><li>• Needle thoracotomy for suspected tension pneumothorax</li><li>• IV of NS with large-bore catheters</li><li>• Fluid challenge if patient is hypotensive according to the following guidelines:</li><li>• Injury mechanism of blunt trauma: for the SBP of 90 with AMS infuse a bolus of 300 ml of crystalloid. Document full effect of bolus i.e. B/P, heart rate, and improvement in mental status when infusion is finished</li><li>• Injury mechanism of penetrating trauma: IV access TKO, unless SBP drops to less than 60. If SBP is less than 60, infuse a bolus of 300 ml of crystalloid to achieve SBP of 60.</li></ul> |
| BASE HOSPITAL CONTACT CRITERIA   |  |
| <ul style="list-style-type: none"><li>• Consider <b>Morphine sulfate</b>, 4 mg IVP, and repeat to max of 20 mg in patients with no evidence of head injury (GCS &lt; 15) or signs of hypoperfusion. Use smaller doses if patient is very young or elderly.</li><li>• Consider <b>Ondansetron</b> 4 mg IV/IM for nausea/vomiting, may be repeated q 20" to a maximum of 12 mg.</li></ul>  |  |

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## DOCUMENTATION

Oxygen given.

Chest exam documented.

IV of NS established.

## PRECAUTIONS AND COMMENTS

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- Chest injuries significant enough to cause respiratory distress are commonly associated with significant internal blood loss. Reassess frequently for signs and symptoms of hypovolemia.
- Significant intra-thoracic or intra-abdominal injury may occur without any external signs of injury, particularly in children. Consider the mechanism of injury and the forces involved and be highly suspicious of occult trauma.
- Consider pre-existing medical causes of respiratory distress such as bronchospasm, pulmonary edema, or COPD.
- If there is any question as to the hemodynamic status of a patient when administering **Morphine sulfate** the Base Hospital shall be contacted.