

The background image shows two EMTs in an ambulance. One EMT on the left is wearing a stethoscope and gloves, leaning over a patient. The other EMT on the right is wearing glasses and gloves, also attending to the patient. The patient is lying on a gurney, partially covered by a white sheet. The ambulance interior, including windows and equipment, is visible in the background.

TRANSITION SERIES


TOPICS

FOR
THE

EMT

TOPIC 39

Abdominal Trauma



Objectives

- Review speculated incidences of abdominal trauma and internal bleeding.
- Review types of abdominal organs.
- Discuss assessment findings consistent with abdominal trauma.
- Define current treatment recommendations.




Introduction

- Abdominal trauma will occasionally present itself in such a way that the EMT can form a reliable field impression, other times not.
- Regardless, even if the EMT is not sure what is going on, he must always know what to do.




Epidemiology

- Trauma is the leading cause of death from the age of 1 to 44.
- When considering internal bleeding and multisystem trauma however, blunt abdominal trauma, is consistently among the leading causes.



Pathophysiology

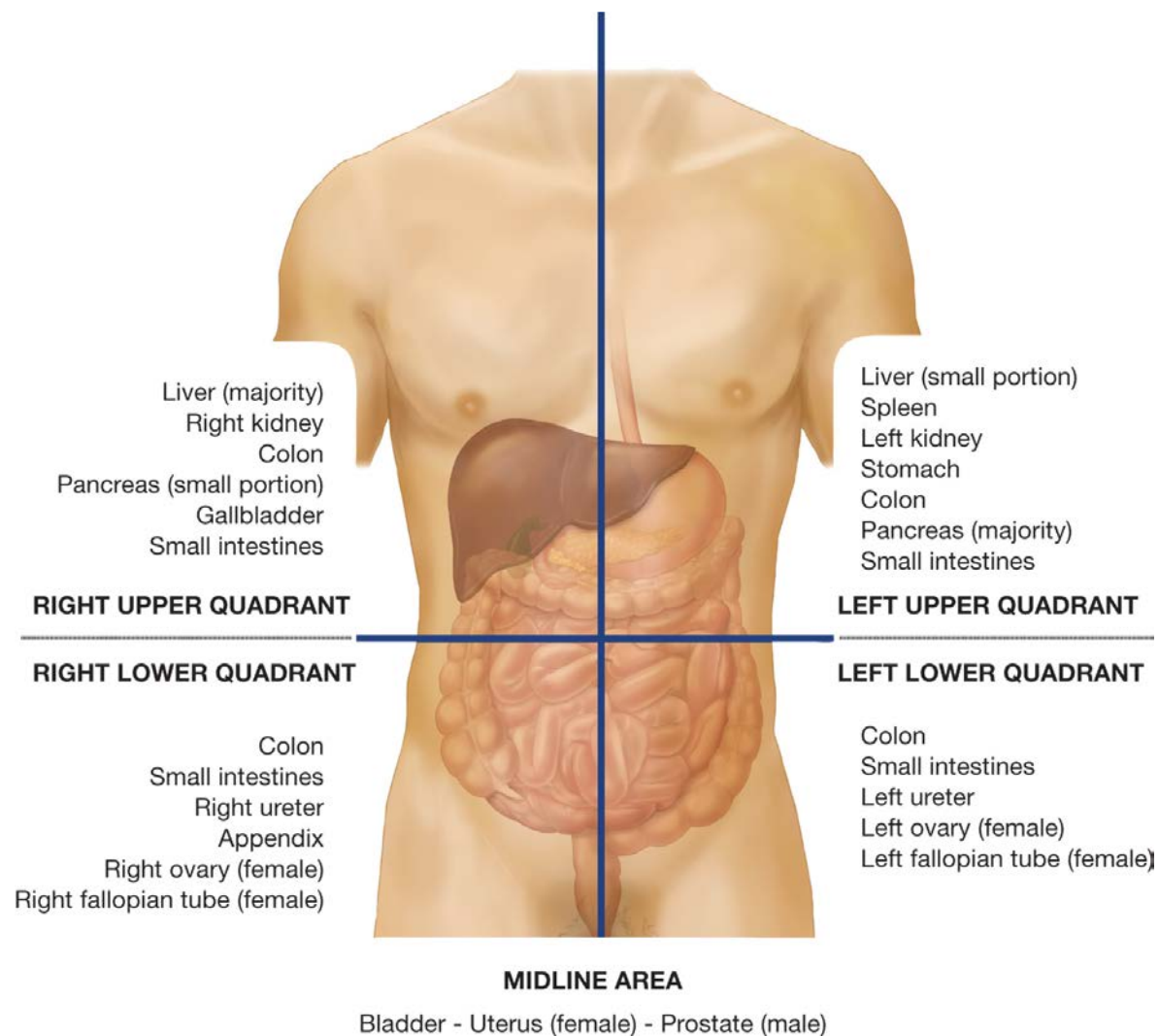
- Types of abdominal organs
 - Hollow organs
 - Tend to spill contents with trauma
 - Solid organs
 - Can bleed heavily if lacerated or fractured
 - Vascular organs
 - Several large blood vessels in the abdomen
 - Trauma can cause massive hidden blood loss



Pathophysiology

- Trauma to the abdomen
 - Direct force injury
 - Compression injury
 - Shearing/Deceleration
 - Injury


Figure 39-1 The four quadrants of the abdomen.





Assessment Findings

- Depending on the quadrant injured and the organs involved:
 - Abdominal pain
 - Ecchymosis around the naval or flanks
 - Abdominal guarding, distention, masses
 - Findings of hypovolemic shock



Assessment Findings

- Depending on the quadrant injured and the organs involved:
 - Nausea, vomiting
 - Tenderness to palpation
 - External indications of trauma



Emergency Medical Care

- Spinal immobilization considerations
 - Traumatic incidents
- Airway considerations
 - Ensure open airway
 - Maintain airway if needed



Emergency Medical Care

- Breathing considerations
 - Abdominal injury may cause lung injury
 - Use high-flow oxygen if breathing adequately
 - PPV at either 8-10 or 10-12 (based on pulse)



Emergency Medical Care

- Circulatory considerations
 - Importance of pulse checks
 - If major bleed present (whether arterial or venous), control it as soon as possible
- Transport with knees flexed if possible
- Other considerations
 - Management of evisceration
 - Management of impaled object

Figure 39-5 Steps in dressing an open abdominal wound.



Figure 39-5 (continued) 1. Cut away clothing from the wound.



Figure 39-5 (continued) 2. Soak a dressing with sterile saline.




Figure 39-5 (continued) 3. Place the moist dressing over the wound.




Figure 39-5 (continued) 4. Apply an occlusive dressing over the moist dressing if local protocols recommend that you do so.






Case Study

You are treating a female patient who was kicked in the abdomen by a horse while working on her farm. Bystanders stated she was not knocked out, but as you approach, the patient she looks responsive.




Case Study

- Scene Size-Up
 - Standard precautions taken
 - Scene is safe
 - Female patient 38-40 years old, 125 pounds
 - Patient lying supine on ground
 - No entry nor egress problems




Case Study

- Primary Assessment Findings
 - Patient responsive to loud verbal stimuli
 - Airway appears open, patient able to speak
 - Breathing is rapid but adequate, breath sounds present




Case Study

- Primary Assessment Findings
 - Carotid and radial pulses present, but fast
 - Peripheral skin is warm and diaphoretic
 - No major external bleeds
 - Patient complaining of URQ abdominal pain




Case Study

- Is this patient a high or low priority? Why?
- What interventions should be provided at this time?




Case Study

- What types of organs are present in the upper right quadrant?
- What kind of abdominal injury could she have, given the information known thus far?




Case Study

- Medical History
 - None
- Medications
 - None
- Allergies
 - None




Case Study

- Pertinent Secondary Assessment Findings
 - Pupils slightly dilated, but still reactive to light
 - Airway patent and maintained by the patient
 - Breathing is rapid, alveolar sounds present
 - Central and peripheral pulse present




Case Study

- Pertinent Secondary Assessment Findings
 - Skin cool and moist, URQ abdominal pain with some guarding
 - B/P 110/95, HR 110, RR 22
 - SpO₂ 95% on room air, 99% on oxygen



Case Study

- If this patient suddenly deteriorated, what would be your suspicion as to why?
- What organ do you think has been damaged from the horse kick?



Case Study

- Care provided:
 - Patient kept supine
 - High-flow oxygen via NRB mask
 - Full spinal immobilization done very carefully
 - ALS intercept started early
 - Patient packaged and taken to ambulance via wheeled cot
 - Transport to hospital initiated



Summary

- Abdominal injuries will many times go undiagnosed by the EMT due to the complexity of advanced diagnostics needed to make the decision. But this does not alleviate the need to care for them correctly.



Summary

- Repeated assessments while transporting will allow the EMT to detect any deterioration in the patient's condition.