

PRACTICE GUIDELINES: BLUNT ABDOMINAL TRAUMA (ULTRASOUND CREDENTIALLED RESUSCITATION TEAM)

OBJECTIVES:

1. Define the patient that might have significant intra-abdominal injury after blunt trauma.
2. Define suggested diagnostic approaches to determine intra-abdominal injury.
3. Define strategies for evaluation of patients with blunt abdominal trauma.

DEFINITIONS:

Ultrasound Credentialed: A physician will be credentialed via their own departmental and medical staff credentialing process.

FAST EXAM (Focused Abdominal Sonography in Trauma): An ultrasound examination of the abdomen that utilizes a 4-view approach for the diagnosis of blood or fluid in the abdominal cavity and pericardial fluid (this will be referred to as the FAST exam below). E-FAST is an extended exam that includes transverse views of the chest to look for pneumothorax.

GUIDELINES:

1. Treat the ABC's first. The diagnosis of abdominal trauma is part of the secondary survey.
2. Perform physical examination of the abdomen, including rectal exam and flank exam.

****REMEMBER A NEGATIVE EXAM *DOES NOT* RULE OUT INJURY WHILE A POSITIVE ONE RULES ONE IN****

3. Consider the possibility of abdominal injury in the following situation:
 - a. Obvious abdominal pain with or without peritoneal findings on physical examination.
 - b. Significant external findings on the abdominal wall such as deformity contusion, bleeding, laceration (seatbelt sign)
 - c. Pelvic fracture.
 - d. Fractures present above and below the diaphragm.
 - e. Lower rib fractures.
 - f. Lumbar or low thoracic spine fractures.
 - g. Unexplained hemorrhage, shock or blood loss.
 - h. A history of abdominal impact (e.g., deformed steering wheel, passenger compartment damage) in a patient with altered sensorium or not monitored.
 - i. Drugs and alcohol impairment.
 - ii. Tetraplegia, paraplegia.
 - iii. Traumatic brain injury with coma.
 - iv. Prolonged non-abdominal surgery requiring anesthesia.
4. Go immediately to the operating room for laparotomy in the following situation:
 - a. Findings of diffuse peritoneal irritation (as in general surgery).
 - b. Hemorrhagic shock with an indication that there is blood loss in the abdomen
 - c. Obvious peritoneal penetration. (Note: Laparoscopy may be used in stable patients to r/o significant injury.)

5. If the patient has possible abdominal injury and has unstable vital signs, perform the FAST exam (see following paradigm).
 - a. If positive (evidence of blood in the peritoneal cavity), go to the operating room for exploratory laparotomy
 - b. If negative, consider other causes of massive hemorrhage resulting in hemodynamic instability (long bone fractures, pelvic fractures, hemothorax). (NOTE: If no other source is found rapidly then consider laparotomy as a negative FAST can be a false negative.
6. If the patient has a possibility of abdominal injury and no gross need for exploration and is stable (i.e., relatively normal) vital signs:
 - a. Perform the FAST exam (may go directly to CT was well).
 - b. If positive, perform abdominal CT scan.
 - i. If CT scan shows solid organ injuries, then admit the patient for observation. (See guidelines for non-operative management of spleen and liver injuries.)
 - ii. If CT scan shows no solid organ injuries and confirms abdominal fluid strongly consider ***performing laparotomy to fully evaluate the bowel.***
7. If observation is chosen patients should have serial abdominal exams and laboratory studies(CBC). If the patient develops peritoneal signs, significant fever or increasing pain away from sites of injury, consider laparotomy/oscopy