TRAUMA/SURGICAL CRITICAL CARE

DEPARTMENTAL GUIDELINES AND PROCEDURES

TITLE: TRUNCAL STAB WOUNDS DIAGNGOSTIC EVALUATION GUIDELINE

PURPOSE: To provide guidelines for the diagnostic evaluation in patients with truncal stab wounds.

GUIDELINE/PROCEDURES STATEMENT:

I. GUIDELINES/ RATIONALE:

The practice of mandatory laparotomy for stab wounds to the abdomen has long been defunct. The complication rate of any laparotomy for trauma has been as reported to be as high as 20%. While everyone agrees that the hemodynamically unstable patient, those with peritonitis, or those with evisceration should receive an emergent laparotomy, the management of stable patients remains varied. As such we have adopted guidelines for the management of hemodynamically stable patients with stab wounds to the abdomen according to anatomical location.

1. Back/Flank stab wounds are defined as those between the tips of the scapulae and posterior iliac crests, posterior to the mid-axillary line. Physical examination alone is unreliable in this group, and DPL is unable to evaluate the retroperitoneum. Triple contrast (oral, rectal, and intravenous) CT has a sensitivity of 89-100% and a specificity of 98-100% in diagnosing intra-abdominal and retroperitoneal injuries.

Diagnostic Procedure: **Triple contrast CT of the abdomen and pelvis**

2. Thoraco-abdominal stab wounds are defined as those between a circumferential line connecting the nipples and tips of the scapulae superiorly, and the costal margins inferiorly. Occult diaphragmatic injury found in as many as 24% of these patients. Missed **left** diaphragm injury may result in herniation of the abdominal viscera through the defect as long as months or years after the injury. We have selected laparoscopy as the diagnostic modality in this group to be performed at least 8 hours after injury to rule out hollow viscus injury and thus allow laparoscopic repair of the diaphragmatic injury.

Diagnostic Procedure: **Diagnostic laparoscopy 8 hours after injury for ALL left**

sided injuries and to be considered for right sided injures in select cases

3. Anterior abdominal stab wounds (AASW) are defined as those anterior to the mid-axillary line, from the xiphoid process to the pubic symphysis. Although optimal management of stable patients with AASW is controversial, we have selected serial abdominal exams as the preferred method of management. Local wound exploration without fascial penetration may allow for discharge if performed. Deteriorating physical exam, new onset tachycardia, hemodynamic instability, fever, increasing leukocytosis, to name a few, should prompt consideration of exploration.

Diagnostic Procedure: Admit for observation; **vital signs every 4 hours; serial abdominal exams by a Surgery Chief Resident (PGY4/5) every 8 hours documented in the medical record; CBC every 8 hours**

*Stab wounds may fall into more than one defined region, thus a combined work-up may be required. For these types of wounds, or in the setting of multiple stab wounds, exploration may be indicated. **Consider cardiac injury in epigastric stab wounds.**

REFERENCES:

1. Easter DW, Shackford SR, Mattrey RF, et al: A prospective, randomized comparison of computed tomography with conventional diagnostic methods in the evaluation of penetrating injuries to the back and flank. Arch Surg 1991;126:1115-9.

2. Himmelman RG, Martin M, Gilkey S, et al: Triple-contrast CT scans in penetrating back and flank trauma. J Trauma 1991;31:852-5.

3. Kirton OC, Wint D, Thrasher B, et al. Stab wounds to the bank and flank in the hemodynamically stable patient: a decision algorithm based on contrast-enhanced computed tomography with colonic opacification. Am J Surg 1997;173:189-93.

4. Albrecht RM, Vigil A, Schermer CR, et al. Stab wounds to the back/flank in hemodynamically stable patients: evaluation using triple-contrast computed tomography. Am Surg 1999;65:683-7.

5. Murray JA, Demetriades DD, Cornwell EF, et al: Penetrating left thoracoabdominal trauma: The incidence and clinical presentation of diaphragm injuries. J Trauma 1997;43:624-626.

6. Thompson JS, Moore EE. Peritoneal lavage in the evaluation of penetrating abdominal trauma. Surg Gynecol Obstet 1981;153:861-863.

7. Tsikitis V, Biffl WL, Majercik S, et al: Selective clinical management of anterior abdominal stab wounds. Am J Surg 2004;188,807.

8. Nagy K, Roberts R, Joseph K, et al: Evisceration after abdominal stab wounds: is laparotomy required? J Trauma 1999;47:622-4.

DEPARTMENT OF PRIMARY RESPONSIBILITY:

Trauma Services

REVISION HISTORY:

Effective Date	Version # (If Applicable)	Review or Revision Date (Indicate Reviewed or Revised)	Reviewed or Approved by: (Directors, Committees, Managers, and Stakeholders etc.)
09/07/16	1		Trauma Protocol and Research Committee