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Management of Solid Organ Injuries

Purpose: To define a clinical pathway for the management of liver and/or splenic injuries, whether operative or non-operative

Guidelines:

- A. See Attachment A: Clinical Practice Guideline for Blunt Liver and Spleen Injury for the Adult Patient

- B. Splenic and/or liver injury with normal hemodynamics
 - a. Grade I – III spleen or liver injury with no to moderate hemoperitoneum and hemodynamically normal
 - i. Admit to the floor
 - ii. Utilize Low Grade Order Set
 - iii. Discharge criteria
 - 1. To home when hemodynamically normal for 36 hours and no change in abdominal exam for 36 hours
 - b. Grade IV – V
 - i. Includes extravasation and pseudoaneurysm or large hemoperitoneum
 - 1. Consult Vascular Surgery to evaluate for angiography
 - 2. Admit to ICU
 - 3. Utilize High Grade Order Set
 - ii. Discharge criteria
 - 1. Move to Low Grade Order Set
 - 2. To home when hemodynamically normal for 36 hours and no change in abdominal exam for 36 hours

- C. Spleen and/or liver injury with normal hemodynamics and with ongoing resuscitation
 - a. Consult Vascular Surgery to evaluate for angiography
 - b. ICU or OR based on stability

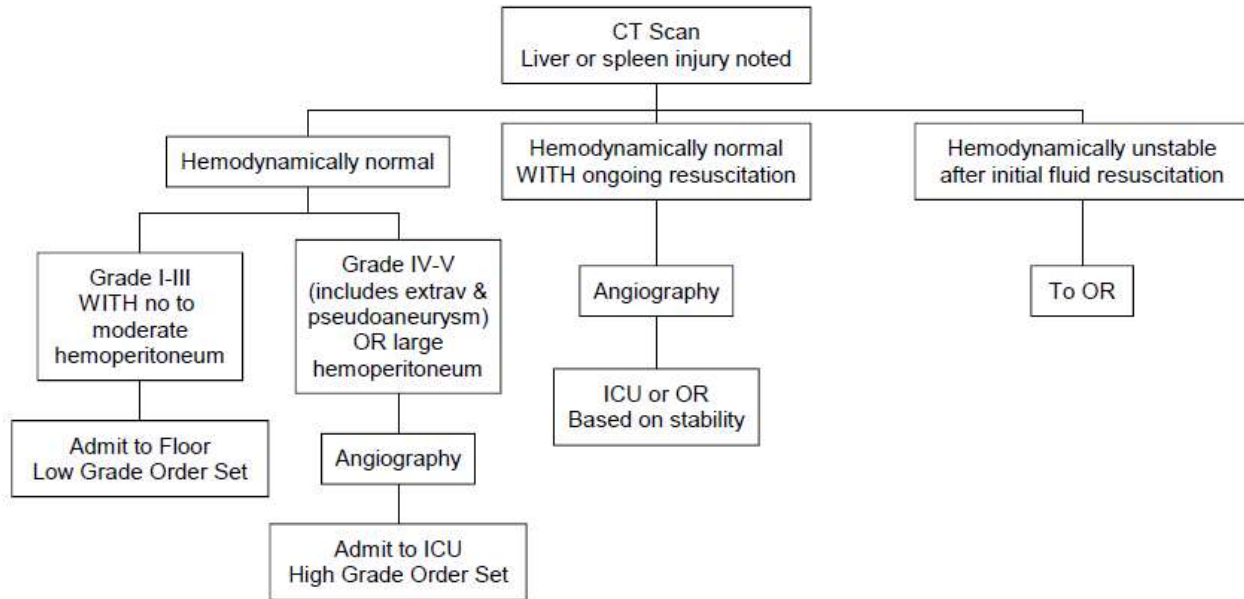
- D. Spleen and/or liver injury with instability at any time after initial fluid resuscitation
 - a. To OR
 - i. If splenectomy is required, administer vaccines on postoperative Day 1
 - 1. Pneumococcus vaccine (Pneumovax)
 - 2. Meningococcus vaccine
 - 3. Haemophilus influenza vaccine
 - ii. Vaccines are not required for patients who require embolization only

- E. Consider MTP and/or Tranexamic acid (TXA) if onset of blood loss < 3 hours
- F. DVT Prophylaxis:
 - a. SCD on admission
 - b. Consider chemical DVT prophylaxis within 24 hours of admission or when Hgb stabilizes.
- G. Discharge Instructions
 - a. Activity
 - i. Non-vigorous, normal activity weeks 0-6
 - ii. Vigorous activity weeks 7-12
 - iii. High impact activity/sports after 12 weeks
 - b. Expect mild increase in abdominal pain 7-10 days after injury
 - i. Should return to baseline after 1-2 days
 - c. Call if
 - i. New, unrelenting pain
 - ii. Frequent lightheadedness
 - iii. Persistent pain after 2 weeks

References:

- Christmas AB, Jacobs DG. Management of hepatic trauma in adults. *UpToDate*. Nov 24, 2015
- Maung AA, Kaplan LJ. Management of splenic injury in the adult trauma patient. *UpToDate*. Apr 27, 2016
- IU/Eskenazi, Level 1 Trauma Center Trauma Care Protocols and Management Guidelines. Division of Trauma, Critical Care and Emergency Surgical Services
- Stassen, et. al. EAST practice management guidelines work group. Selective nonoperative management of blunt splenic injury: An Eastern Association for the Surgery of Trauma practice management guideline. November 2012.
- Stassen, et. al. EAST practice management guidelines work group. Selective nonoperative management of blunt hepatic injury: An Eastern Association for the Surgery of Trauma practice management guideline. November 2012.
- Madbak F, Price D, Skarupa D, et al, Serial hemoglobin monitoring in adult patients with blunt solid organ injury: less is more. *Trauma Surg Acute Care Open* 2020;5:3000446

Clinical Practice Guideline
for Blunt Liver and Spleen Injury
for the Adult Patient



	Low Grade Order Set	High Grade Order Set
Vital signs	q2 ^o x 4, then q4 ^o x 24 ^o	q2 ^o x 4, then q4 ^o x 24 ^o
Urine output	q shift	q 4 ^o
Lab	Hgb on admission and following day	Hgb on admission, 8 hrs after admission, then daily only at physician discretion
Activity	Up ad lib	Up in chair
Thresholds	Call MD for SBP < 90, HR > 120, significant change in abdominal exam	Call MD for SBP < 90, HR > 120, significant change in abdominal exam