

## Practice Management Guideline Spleen & Liver Trauma Solid Organ Injury - SOI

### Hemodynamically Unstable

1. Give 20ml/kg NS bolus x2, then up to 20 ml/kg PRBC
2. Clinical suspicion of SOI as cause of ongoing life threatening hemorrhage will go straight to the operating room
3. Patients with recurrent hypotension with confirmation of hemoperitoneum by FAST or CT will go to the operating room or interventional radiology for definitive therapy.
4. Patient with peritonitis and sufficient suspicion for a hollow viscus injury and a solid organ injury will go to the operating room for diagnosis and treatment.
5. Hemodynamically stable patient who initially respond to fluids and are without peritonitis are eligible to enter the pathway for SOI.

### Initial Evaluation

1. Patients with SOI AAST grade 3 or less, no contrast blush on CT, normal stable vital signs, Hgb >9gm/dl - trauma surgeon evaluation within 12 hours.
2. Patients with SOI AAST grade 4 or 5, any contrast blush on CT, any period of hypotension or initial Hgb <9gm/dl - trauma surgeon evaluation within 2 hours of arrival.

### Initial Orders for Stable Patients

1. Admit to a non-ICU bed unless other injuries require intensive care or monitoring.
2. Vitals Q2 hours x4 then Q4 hours if continued stability
3. Labs - Hgb 6 & 12 hours post admission
  - If stable (change is less than 0.8 gm/dl) x2 then stop lab checks

Initial Hgb >9	Initial Hgb <9 and >7	Initial Hgb <7
No type and cross	Type and screen	Type and crossmatch 2 units
Ad lib diet & activity	Bed rest overnight	Bed rest overnight
Saline lock fluids	Ad lib diet Saline lock fluids	Clear liquids only IVFs D5 NS + 20mEq/l KCL
Stable overnight: D/C home when meeting D/C criteria	Stable overnight: D/C home when meeting D/C criteria	Stable overnight: Ad lib diet and activity, saline lock fluid
		Stable 12 hrs with ambulating & diet: D/C home when meeting DC criteria

### D/C Criteria

1. Labs are stable x2
2. Vital signs are normal and stable
3. Ambulating with minimal assistance
4. Tolerating regular diet

### Follow-up Instructions

- AAST Grade 1&2 SOI - Follow up in Pediatric Surgery Trauma Clinic in 2 weeks
- AAST Grade >2 - Follow up in Pediatric Surgery Trauma Clinic in 2 weeks, further follow-up at surgeon discretion
- No routine imaging. Ultrasound for symptoms of jaundice, abdominal pain, early satiety
- AAST grade of SOI plus two for the number of weeks of non-contact activity
  - ◊ Grade I - 3 weeks
  - ◊ Grade II - 4 weeks
  - ◊ Grade III - 5 weeks
  - ◊ Grade IV - 6 weeks

### Practice Management Guideline Pediatric Solid Organ Injury

ATOMAC  
 Blunt Pediatric Liver/Spleen Injury  
 Guideline v11.0

**Suspected Liver or Spleen Injury  
without peritonitis**

Does the surgeon suspect ongoing or very recent bleeding?

20ml/kg  
LR or NS

Sustained response to NS?

Admit to Non-ICU  
 VS Q2H x4 then Q4H  
 T&S if close to Hb 7.0  
 Bedrest overnight  
 Hb at 6 hrs  
 Hb at 12, 24 hrs post injury are  
 optional unless clinically  
 indicated by VS or exam

Symptomatic or Hb <7.0>?

Floor status 18 hrs  
 Regular diet  
 Ambulate

**Home if:**  
 Hb stable, VS normal,  
 tolerating diet & minimal ab-  
 dominal pain  
 Use caution if abdominal wall injury  
 (handlebar injury or seatbelt sign)  
 Provide discharge instructions

10ml/kg PRBC  
 NPO, Hb q6H  
 Bedrest  
 Additional night

Hb stable x2?

Remain in PICU

Hb stable x2?

CT Scan  
 Admit PICU  
 NPO, Hb Q6H  
 Bedrest until Hb stable  
 Consider embolization

Is patient symptomatic or have Hb<7.0>?

10-30ml/kg PRBC  
 NPO, Hb Q6H  
 Bedrest until Hb stable  
 Consider embolization

Hb<7.0 or vital signs still unstable

10-20 ml/kg PRBC  
 Consider other causes  
 (head injury, tension pneumo,  
 tamponade, pelvic hemorrhage)  
 Consider MTP

Recurrent hypotension  
 or lack of sustained response to  
 PRBCs

Already given:  
 >40ml/kg PRBC or  
 >4 units PRBC

Failure of NOM Algorithm

Angiogram & Embolization

Surgery

NOM at surgeon's discretion

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