# **Blunt Liver and Spleen Injury**

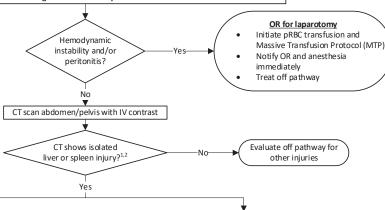
THIS PATHWAY SERVES AS A GUIDE AND DOES NOT

Inclusion Criteria: Blunt trauma to abdomen or torso with concern for liver/spleen injury Exclusion Criteria: Penetrating injury to chest or abdomen, clinically significant CNS or thoracic injury, suspected physical abuse (see Suspected Physical Abuse Pathway)

### Initial Care in the ED:

- Consult Pediatric Surgery/Trauma via Voalte or call/text 860-578-5071
- History and physical exam
- Trauma labs (CBC, type and cross), amylase/lipase, "trauma panel"
- Consider pelvis X-ray
- Consider Focused Assessment with Sonography for Trauma (FAST) exam
- Establish reliable IV access

\*Seatbelt sign mandates a hospital admission\*



Grade I-III Liver/Spleen Injury

#### Admit to MS Unit:

CBC on admission then g6hr x1

<sup>1</sup>Consider IR embolization for recurrent hypotension or Hgb <7 <sup>2</sup>"Blush" on CT scan is <u>not</u>

necessarily an indication for IR

embolization in pediatric patients

Further labs at the discretion of pediatric surgeon

### FEN/GI:

- Advance as tolerated
- Miralax 1 g/kg/day PO once daily (max 17 g/day) until stooling

### Pain:

- Acetaminophen 15 mg/kg/dose PO q6hr (max 1000 mg/dose, not to exceed 4000 mg/day)
- Consider oxycodone 0.1 mg/kg/dose (max 5 mg/dose) PO q4hr or morphine 0.05 mg/kg/dose (max 5 mg/dose) IV q3hr or hydromorphone 0.015 mg/kg/dose (max 0.5 mg/dose) q3hr PRN if aceta minophen is insufficient

### Other:

- Vital signs q4hr
- Activity as tolerated
- Sequential compression devices (SCD) if age ≥12 years
- Tertiary survey and CRAFFT screen (for alcohol and substance misuse) by MS nurses within 24 hrs

### Discharge Criteria:

Hgb/Hct stable x3; afebrile; normal HR & UOP; tolerating diet; minimal abdominal pain

# Discharge Medications:

- Miralax 1 g/kg/day PO once daily (max 17 g/day) PRN constipation
- Acetaminophen 15 mg/kg/dose q6hr PRN pain (max 75 mg/ kg/day or 4000 mg/day)

### Discharge Instructions:

- No strenuous activity or contact sports for grade of injury + 2 weeks. Only activities that keep 2 feet on the ground (no trampolines, no bikes, no dirt bikes, no horseback riding, no ATV, no skiing, etc)
- Follow up with pediatric surgery in 4-6 weeks after discharge

### Consider Admission to PICU: Labs:

Hct g6hr until vitals are normal for age

### FEN/GI:

NPO until vitals are normal for age and Hct stable

# Pain:

Acetaminophen 15 mg/kg PO q6hr (max 1000 mg/dose, not to exceed 4000 mg/day)

Grade IV-V Liver/Spleen Injury

- Consider oxycodone 0.1 mg/kg/dose (max 5 mg/dose) PO q4hr or morphine 0.05 mg/kg/dose (max 5 mg/dose) IV q3hr or hydromorphone 0.015 mg/kg/dose (max 0.5 mg/dose) q3hr PRN if aceta minophen is insufficient
- Consider morphine or hydromorphone PCA Please see PCA policy

## Other:

- Vital signs q2hr x24 hrs, then q4hr if stable
- Bedrest until vitals normal for age, then activity as tolerated
- Sequential compression devices (SCD) if age ≥12 years
- Foley catheter (remove prior to transfer to MS floors)

### Consider transfusion for:

- Unstable vitals after 20 mL/kg bolus of isotonic IVF
- Hemoglobin <7 g/dL
- Signs of ongoing or recent bleeding



2. Angiography and embolization

3. Exploratory laparotomy

