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Owner:	**Jay Menaker, MD/Tiffany Kuebler**
Area:	**Shock Trauma Center**
Policy Type:	**Guideline**
Applicability:	**Shock Trauma Center**

SPLENIC INJURY MANAGEMENT ALGORITHM

Blunt splenic injury management algorithm

Diagnosis of splenic injury by CT scan

Hemodynamically stable

Yes → Management by AAST grading system (see page 2)

No → OR for EX Lap[a]

	Grade 1	Grade 2	Grade 3[c]	Grade 4[f]/5
Admission location	non-monitored	monitored (IMC)	monitored (IMC)	monitored (IMC)
Serial CBC frequency	q8 x 24h	q6 x 24hr then q12 x 24 hr	q6 x 24hr then q12 x 24 hr	q6 x 24hr then q12 x 24 hr
Serial abdominal exams	Yes	Yes	Yes	Yes
Trauma Endovascular consult	No	No	Urgent[d]	Emergent[e]
Repeat CT scan	No	24-48 hrs[b]	48-72 hrs[b]	48-72 hrs[b]

a - All patients who have a splenectomy require vaccinations (see pages 3 and 4)
b - Following initial imaging/Angiogram
c - Isolated subcapsular hematomas ***should not*** be considered for angiographic evaluation/embolization
d - Urgent – seen and evaluated within 4 hours of consult time (daytime, including weekends)
e - Emergent – **seen and evaluated within 1 hour of consult time**
f - Grade 4 injuries without active bleeding require 'Urgent' Trauma endovascular consult

grade I

- Subcapsular hematoma <10% of surface area
- parenchymal laceration <1 cm depth
- capsular tear

grade II

- Subcapsular hematoma (◇) 10-50% of surface area
- intraparenchymal hematoma <5 cm
- parenchymal laceration 1-3 cm in depth

grade III

- Subcapsular hematoma (◇) >50% of surface area
- ruptured subcapsular or intraparenchymal hematoma ≥5 cm
- parenchymal laceration >3 cm in depth

grade IV

- any injury in the presence of a splenic vascular injury (*) or active bleeding confined within splenic capsule
- parenchymal laceration involving segmental or hilar vessels producing >25% devascularisation

grade V

- shattered spleen
- any injury in the presence of splenic vascular injury (#) with active bleeding extending beyond the spleen into the peritoneum

Additional points

1. advance one grade for multiple injuries up to grade III
2. ◇ - Isolated subcapsular hematomas should not be considered for angiographic embolization
3. * - vascular injury (i.e. pseudoaneurysm or AV fistula) - appears as a focal collection of vascular contrast which decreases in attenuation on delayed images
4. # - active bleeding - focal or diffuse collection of vascular contrast which increases in size or attenuation on a delayed phase

Immunizations

Guidelines for vaccinations of patients with functional or anatomical asplenia

- Pneumococcal:
  - Prevnar 13 followed by Pneumovax 23 at least 8 weeks later
- Haemophilus Influenza b: one time vaccination
- Meningococcal:
  - MenA 2 doses, at least 2 months apart, revaccinate Q5 years
  - MenB 2 doses, at least 1 month apart (simplified to 2 months for this schedule)

	Day 1	8 Weeks	6 Mo.	5 Yrs	10 Yrs	15 Yrs	20 Yrs (etc)
Prevnar 13	X						
Pneumovax 23		X		X			
Hib	X						
MenA (Menactra)	X	X		X	X	X	X
MenB (Bexcero)	X	X					

Immunizations

In the event Pneumovax 23 is inadvertently given first (or if patient has previously received the Pneumovax 23 prior to asplenia):

- Prevnar 13 should be given one year later
- Re-vaccinate with Pneumovax 23 in five years

	Day 1	1 Yr	5 Yrs
Pneumovax 23	x		x
Prevnar 13		x	