AAST Acute Care Surgery Didactic Curriculum

Splenic Abscess/Cyst

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Splenic Abscess

Highlights:

- Splenic abscess has an incidence of approximately 0.14% - 0.7%, with increased incidence in developing countries. It can result as a consequence of prior splenic injury, ischemia, IV drug use, and immunocompromised status.
- Typical presentation of splenic abscess includes fever, left upper quadrant abdominal pain, and leukocytosis.
- Cross-sectional imaging should reveal low attenuation on CT scan, with peripheral rim-enhancement (which distinguishes these lesions from splenic cysts).
- Treatment for splenic abscess includes hospital admission, broad spectrum antibiotic therapy, with percutaneous drainage of the abscess vs. splenectomy for definitive management.
- While there is some controversy regarding the optimal treatment for splenic abscess, most reviews suggest a trend toward lower complications and mortality with percutaneous drainage vs. splenectomy, however we recommend percutaneous aspiration for abscesses with a definite wall, unilocular or bilocular, and without visible internal septations on imaging.
- Indications for splenectomy include inability to provide percutaneous drainage, failure of nonoperative management with IV antibiotics

Splenic Cyst

Highlights:

- Splenic cysts are conventionally divided into parasitic and nonparasitic cysts. Parasitic cysts are typically found in endemic areas and associated with underlying parasitic infection, like toxoplasmosis or echinococcus.
- Nonparasitic cysts are typically either congenital, neoplastic, traumatic, or degenerative. Classification of the subtypes is only made definitively by pathologic examination of the cysts, however diagnosis can many times be made by imaging findings.
- Cross-sectional imaging can include CT and MRI, which should show low attenuation of these lesions with lack of rim enhancement, decreased signal intensity on T1-weighted imaging and increased signal intensity on T2-weighted imaging.

- While most splenic cysts are asymptomatic, those that exhibit symptoms can cause pain, dyspnea, loss of appetite, hypertension, and hypersplenism.
- Splenic cyst size > 5cm is associated with increased risk of rupture and is typically an indication for intervention.
- Percutaneous sclerotherapy (typically using polidocanol or sodium tetradecyl sulfate) is a minimally invasive alternative to surgical intervention, with recurrence as low as 7% in cysts >8cm, however can be associated with intracapsular hemorrhage, intra-abdominal hemorrhage, and perisplenic hematoma formation.
- Surgical interventions can include splenectomy (recurrence rate 0%), laparoscopic cystectomy (recurrence rate 88%), laparoscopic unroofing of the cyst (recurrence rate 49%). We recommend reservation of surgical intervention, due to its increased invasiveness and recurrence rates, for cases not amenable to percutaneous intervention, or after failure of noninvasive therapy.

Non-traumatic Splenic Hemorrhage

Highlights:

- Non-traumatic splenic rupture is a rare but life-threatening condition with a mortality rate as high as 20%.
- Spontaneous splenic rupture (SSR) is typically associated with predisposing conditions such as malaria, liver cirrhosis, rheumatoid arthritis, pancreatitis, AIDS, splenic venous thrombosis, and malignancy (including leukemia).
- Indications for surgery include severe thrombocytopenia resulting in spontaneous non-splenic bleeding, post-transplant splenic sequestration, and splenic capsular rupture with hemorrhage and hypotension.