Fall down stairs. Left rib fractures.

John A Cieslak III, MD, PhD Charan Singh, MD



















Splenic lacerations, hemoperitoneum, and traumatic pseudoaneurysm formation.



High attenuation extraluminal contrast material, suggesting active extravasation.



CT abdomen with contrast, axial

Homogeneous, intermediate density material, consistent w/ hemoperitoneum

Linear hypoattenuation within the splenic parenchyma, consistent with lacerations

> HEALTH RADIOLOGY

Low attenuation of the superior portion of the spleen suggesting intraparenchymal hematoma vs. infarction.

Linear hypoattenuation within the splenic parenchyma, consistent with lacerations

High attenuation extraluminal contrast material, suggesting active extravasation.

CT abdomen with contrast, coronal



RADIOLOGY

Homogeneous, intermediate density material, consistent w/ hemoperitoneum in the right and left subdiaphragmatic spaces and pericolic gutters. A wellcircumscribed, circular focus (dashed-red circle) of contrast dye, similar in density to the blood pool suggests pseudoaneurysm formation.



Multiple foci of contrast "blush", suggesting active extravasation.

Digital subtraction angiography, splenic artery superselected.



Multiple intravascular coils injected into the splenic artery. Contrast extravasation and probable pseudoaneurysm are no longer seen – downstream of the occluded splenic artery.

Digital subtraction angiography, splenic artery superselected, post-coiling.



- Can occur after blunt or penetrating trauma. The spleen is the most frequently injured intra-abdominal organ after blunt trauma.
- Types:
 - Laceration
 - Hematoma subcapsular (more common) or intraparenchymal.
 - Active Hemorrhage
 - Pseudoaneurysm
 - Splenic infarction.
- Evaluation: FAST ultrasound, CT, DSA



- FAST Ultrasonography:
 - Positive for free fluid. May demonstrate disruption to the splenic echotexture indicating laceration, or hypoechoic regions suggesting hematoma formation.
- CT: Modality of choice for assessing splenic trauma:
 - Lacerations linear or branching hypodensities.
 - Subcapsular hematoma low-density fluid adjacent to the spleen that disrupts the splenic architecture.
 - Active Hemorrhage high density extravasated contrast material that increase in size on delayed phases.
 - Pseudoaneurysm similar in appearance to active hemorrhage but do not increase in size on delayed phases and follow the blood pool.

RADIOLOGY

- DSA:
 - Extravasation of contrast agent (blush) is indicative of active bleeding.
 - A well-circumscribed collection of contrast that does not change size and follows the blood pool contrast is suggestive of pseudoaneurysm formation.
- Treatment:
 - Transcatheter splenic artery embolization
 - Typically performed using coils, but particles and glue also used.





- Splenic artery embolization complications:
 - Left pleural effusion and atelectasis (20-50%)
 - Splenic infarct (~3%) (distal only, with proximal the goal is to completely cut off supply to the spleen).
 - Splenic abscess (~2%)



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