Blunt splenic trauma
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Section: Abdominal imaging
Technique: CT
Case Type: Clinical Cases
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Patient: 40 years, male

Imaging Findings:

The patient was admitted to our hospital after a motorbike’s accident; he was complaining of acute pain referred to left hypochondrium and he was pale, tachycardic, tachypnoic, with typical signs of acute abdomen. A contrast enhanced CT examination of the abdomen was performed and showed, in the whole set of images, subcapsular haematoma of the spleen, multiple parenchymal lacerations and high degree of haemoperitoneum.

Discussion:

Two mechanisms have been proposed for splenic rupture: an immediately rupture of the spleen by trauma or delayed rupture of a subcapsular haematoma. Splenic injuries due to blunt trauma mechanism (e.g. traffic accidents, sports accidents and falls) are among the commonest injuries of the abdomen. Left lower rib fractures are frequently associated. X-Ray examination is usually the first modality performed and shows enlarged and shaded splenic profile, dislocation of stomach, of left colonic flexure and of the left kidney, intestinal gaseous distension (paralitic ileum). CT examination is a sensitive method for detecting and grading blunt splenic injuries and enables distinguishing different patterns. Subcapular haematoma is typically showed as a lenticular shape, along with compression of splenic parenchyma. Intrasplenic haematoma appears as hypodense area within normally perfused splenic parenchyma. Capsular disruption and parenchymal laceration appear as linear defects. Although CT can be accurate in demonstrating splenic rupture, some diagnostic potential pitfalls can occur: earlier scanning after contrast infusion that may produce inhomogeneous contrast enhancement, normal splenic lobulation or cleft simulating splenic laceration, motion and streak artifacts simulating a hematoma. Splenectomy has long been the standard treatment for splenic injuries, but splenic salvage by means of splenorraphy or partial splenectomy has been performed increasingly, since the risk of the infectious and vascular complications in the asplenic state have been recognized. Also for this reason, at the moment, a selective nonoperative management (SNOM) is indicated in patients of all ages, provided they are hemodinamically stable, do not require significant blood trasfusion (no more than 2 units attributable to splenic injury), and have no other associated abdominal injuries.

Differential Diagnosis List: Subcapsular haematoma and haemoperitoneum in splenic rupture.

Final Diagnosis: Subcapsular haematoma and haemoperitoneum in splenic rupture.

References:

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Description: This image is acquired after administration of 140 ml of i.v. contrast media, with a flow rate of 4 ml/s and a delay of 25s. It is showed the presence of abdominal hematic effusion with evidence of considerable perisplenic quantity. Origin:
**Description:** The image, acquired after administration of 140 ml of i.v. contrast media, with a flow rate of 4 ml/s and a delay of 25s, shows considerable gastric distention.

**Origin:**
**Figure 2**

![Image with Description and Origin]

**Description:** This image is acquired after administration of 140 ml of i.v. contrast media, with a flow rate of 4 ml/s and a delay of 25s. At this level it is possible to find minimal quantity of preserved splenic parenchyma within massive perisplenic fluid collection: splenic laceration.

**Origin:**