Abdominal splenosis mimicking metastases from bilateral synchronous renal cell carcinomas

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Section: Abdominal imaging
Area of Interest: Abdomen Case Type: Clinical Cases
Authors: Bell CL, Adapala R.
Patient: 65 years, male

Clinical History:

A 65-year-old patient presented with cough and haemoptysis. The chest radiograph showed a bulky hilum, pleural effusion and paratracheal lymphadenopathy. A CT examination of the chest and upper abdomen was conducted.

Imaging Findings:

CT examination of the upper abdomen demonstrated aggressive looking bilateral renal tumours. In several places throughout the abdomen there were small soft tissue density lesions that were initially thought to be metastases from the renal tumours. Careful analysis revealed the patient to be asplenic and the suspicious lesions were noted to have enhancement characteristics similar to that of normal splenic tissue. A diagnosis of bilateral synchronous renal tumours with incidental splenosis was made. Subsequent history elicited from the patient revealed that he had previously undergone splenectomy for traumatic splenic rupture during childhood.

Discussion:

Splenosis is defined as auto-transplantation of splenic tissue as a result of spillage of cells from the spleen after rupture of the organ capsule at time of injury or splenectomy [1]. The splenic cells recruit a local blood supply and can grow over time to become quite large [2]. It is thought to occur in up to 67% of patients that have had a splenic rupture [3], but the true incidence of this condition is unknown [4]. Splenic implants have no particular characteristic shape, no hilum or hilar artery and do not have a capsule [1]. They are usually multiple and can be localised anywhere in the peritoneal cavity [4]. They can rarely be found in the pelvis and subcutaneous tissues [5] and if associated with diaphragmatic rupture, they can be found in the pleural cavity or pericardium [6].

Splenosis is usually asymptomatic, but can cause abdominal pain or small bowel obstruction due to adhesive bands of splenic tissue [4]. It has also been known to cause gastrointestinal haemorrhage, spontaneous rupture, and torsion [7,8]. Splenic implants located in the peritoneal cavity can be confused with other pathologies. Several differential diagnoses exist, varying depending upon the site of splenosis. If located in the pelvis, endometriosis should be considered [9]. If splenosis is seen within the kidney or liver, renal cancer [5], or hepatic adenoma [10] may be a possibility. If retro-peritoneal splenosis mimics lymphadenopathy, lymphoma [11] should be included in the differentials and if seeded in the peritoneum, mesothelioma or metastases should be considered [4].

In a patient with a history of splenectomy or splenic rupture, splenosis can be demonstrated by ultrasound, computed tomography, magnetic resonance imaging or scintigraphy using heat damaged 99Tc-labelled red blood cells [12].

Correct identification of splenosis in patients who have undergone a splenectomy is vital as an incorrect diagnosis
may lead to unnecessary treatment. This is particularly important in cancer patients. An incorrect diagnosis as metastatic disease could significantly affect the patients’ prognosis and treatment plan. Once the diagnosis of splenosis has been made, further treatment is often not required as it is usually asymptomatic [12].

**Differential Diagnosis List:** Bilateral synchronous renal tumours with incidental abdominal splenosis., Anterior omental metastatic disease, Primary omental pathology

**Final Diagnosis:** Bilateral synchronous renal tumours with incidental abdominal splenosis.

**References:**

Figure 1

Description: Splenosis seen in the left para-colic gutter. Origin:
Figure 2

Description: Splenosis seen in the right anterior omentum and posterior to the descending colon.
Origin:
Description: Splenosis seen in the right anterior omentum, posterior to the descending colon and lateral to the right kidney. Origin:
Figure 4

Description: Absent spleen and nodules of splenosis seen in left upper quadrant. Origin: