Small Bowel Splenule Mimicking a Gastrointestinal Stromal Tumor

Nirav Thosani¹, Santosh Shah², Andres Quesada³, Victor Machicao¹

¹) Department of Gastroenterology, Hepatology and Nutrition; 2) Department of Radiology; 3) Department of Pathology, The University of Texas Health Science Center at Houston, Texas, USA

A 23 year old Hispanic female with no medical history was evaluated as a potential living related renal transplant donor. CT of the abdomen showed a 1.0 x 1.2 x 1.1 cm nodule that appeared to be exophytic from the wall of a small bowel loop (Figs. 1, 2, white arrows). The nodule was enhancing with enhancement characteristics separate from the spleen and was suggestive for a neuroendocrine tumor or gastrointestinal stromal tumor. The patient underwent diagnostic laparoscopy with removal of the mass. Histology revealed characteristic architecture of splenic tissue with white pulp made up of round areas of lymphoid follicles, and red pulp consisting of a meshwork of capillaries and sinuses (Fig. 3, 4x).

Heterotopic autotransplantation of splenic tissue is referred to as splenosis and occurs frequently after disruption of splenic capsule secondary to traumatic rupture of the spleen and subsequent splenectomy [1]. However, intraabdominal and intrathoracic splenic implants, which are also referred as splenules or splenuncules, have been reported without any history of trauma to spleen. Hematogenous spread of splenic pulp or splenic progenitor cells and their subsequent growth in response to tissue hypoxia is a potential mechanism for development of splenules [2]. Splenules usually occur in the left upper quadrant of the abdomen, however they can be found anywhere in the abdominal cavity, thoracic cavity, subcutaneously or even intracranially [3]. In most cases, splenules do not cause any symptoms and even provide some immunological functions [3]. Intraabdominal splenules can present with massive intraperitoneal or gastrointestinal bleeding or even bowel obstruction [3]. Splenules often mimic intraabdominal or intrathoracic masses suggesting malignancy. Splenules and/or splenosis can be diagnosed noninvasively by ⁹⁹mTc sulfur colloid scan or ⁹⁹mTc-labeled heat-denatured autologous red blood cell (⁹⁹mTc-DRBC) scintigraphy [4]. High index of clinical suspicion and awareness regarding presence of splenules without clinical history of trauma can help to avoid unnecessary abdominal surgery.

References