

Chronic Abdominal Pain from Disseminated Splenosis

Michael A. Santos, MD^{1,2}

¹WellSpan Good Samaritan Hospital, Lebanon, PA, USA; ²Penn State Milton S Hershey Medical Center, Hershey, PA, USA.

KEY WORDS: clinical image; abdominal mass; disseminated splenosis; nuclear scintigraphy.
J Gen Intern Med 33(6):976–7
DOI: 10.1007/s11606-018-4414-x
© Society of General Internal Medicine 2018

A 60-year-old woman presented with several years of dull left upper quadrant, mid-epigastric, and right flank pain. Abdominal CT showed multiple soft tissue densities of unclear etiology. She reported having a post-traumatic splenectomy in the 1960s. A technetium-99m-labeled heat-damaged RBC scan (Tc^{99m}-dRBC) demonstrated radiotracer uptake in the left upper quadrant, posterior to the right kidney, and along the right diaphragm, confirming ectopic splenic deposits (Fig. 1).

Disseminated splenosis (DS) is a benign condition caused by metastatic deposits of splenic tissue following trauma or surgery. DS is usually asymptomatic and diagnosed incidentally by ultrasound or computed tomography, but can cause site-specific discomfort mimicking endometriosis or peritoneal metastases.¹ Other reported complications include gastrointestinal bleeding, bowel obstruction, and hydronephrosis.² Nuclear scintigraphy with Tc^{99m}-dRBC localizes ectopic splenic tissue based on the increased uptake of damaged erythrocytes within the reticuloendothelial system.^{3, 4} In the setting of previous splenic trauma, this noninvasive technique is a sensitive and specific tool to establish the diagnosis, potentially avoiding invasive tissue sampling or diagnostic laparoscopy.⁵

Patients with DS may retain partial immunoprotection from encapsulated organisms,⁶ but no studies have shown an optimal approach to assessing residual splenic function.⁷

Corresponding Author: Michael A. Santos, MD; WellSpan Good Samaritan Hospital, Lebanon, PA, USA

Compliance with ethical standards:

Prior presentations: None.

Conflict of Interest: The author declares that he does not have a conflict of interest.

REFERENCES

1. Short NJ, Hayes TG, Bhargava P. Intra-abdominal splenosis mimicking metastatic cancer. *Am J Med Sci* 2011;341:246–9.
2. Connell NT, Brunner AM, Kerr CA, Schiffman FJ. Splenosis and sepsis: the born-again spleen provides poor protection. *Virulence* 2011;2:4–11.
3. Schiff RG, Leonidas J, Shende A, Lanzkowski P. The noninvasive diagnosis of intrathoracic splenosis using technetium-99m heat-damaged red blood cells. *Clin Nucl Med* 1987;12:785–7.
4. Horger M, Eschmann SM, Lengerke C, Claussen CD, Pfannenbergl C, Bares R. Improved detection of splenosis in patients with haematological disorders: the role of combined transmission-emission tomography. *Eur J Nucl Med Mol Imaging* 2003;30:316–9.
5. Lake ST, Johnson PT, Kawamoto S, Hruban RH, Fishman EK. CT of splenosis: patterns and pitfalls. *AJR Am J Roentgenol* 2012;199:W686–93.
6. Pearson HA, Johnston D, Smith KA, Touloukian RJ. The born-again spleen. Return of splenic function after splenectomy for trauma. *N Engl J Med* 1978;298:1389–92.
7. de Porto AP, Lammers AJ, Bennink RJ, ten Berge IJ, Speelman P, Hoekstra JB. Assessment of splenic function. *Eur J Clin Microbiol Infect Dis* 2010;29:1465–73.

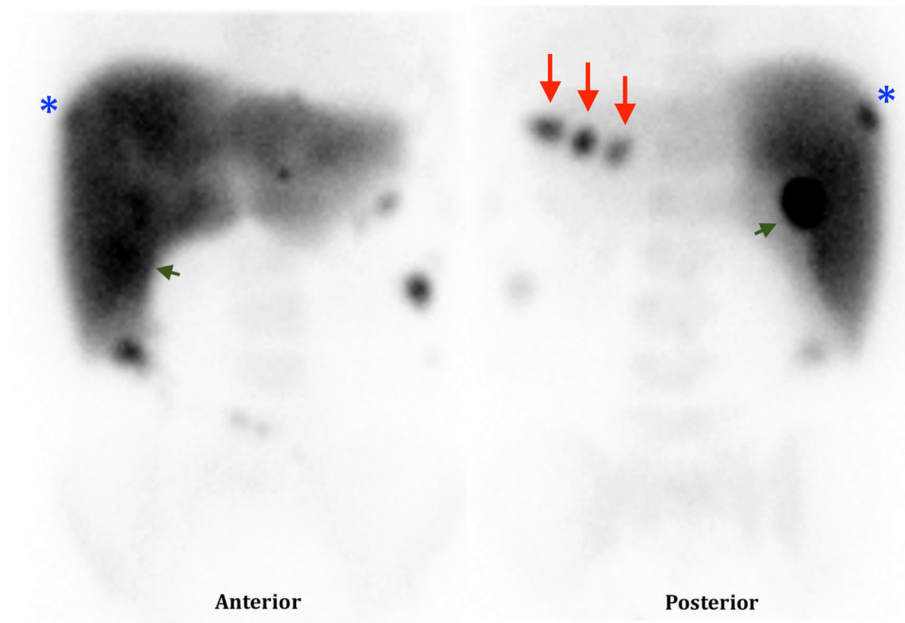


Fig. 1 Maximum intensity projection (MIP) anterior and posterior images of Tc^{99m} scan showing increased radiotracer uptake in three separate splenic tissue deposits in the left upper quadrant measuring 2.3, 2, and 1.5 cm (red arrows), a 1.7 cm subphrenic deposit beneath the right diaphragm (blue star), and a 3 cm deposit posterior to the right kidney (green arrowhead), all correlating with her sites of discomfort.