

Splenic calcifications in a patient with Systemic Lupus Erythematosus: an imaging case review

Alessia S. Galante, DC¹

Lauren J. Tollefson, DC, DACBR¹

A 47-year-old female presented to a chiropractic clinic with known diagnosis of systemic lupus erythematosus. Radiographic examination demonstrated multiple splenic calcifications, an uncommon, yet important finding. The patient was subsequently referred to her primary care physician for co-management and further evaluation.

(JCCA. 2023;67(1):97-100)

KEY WORDS: spleen, calcifications, systemic lupus erythematosus

Une femme de 47 ans s'est présentée dans une clinique chiropratique avec un diagnostic connu de lupus érythémateux disséminé. L'examen radiographique a mis en évidence de multiples calcifications spléniques, une découverte peu commune mais significative. La patiente a ensuite été adressée à son médecin traitant pour une prise en charge conjointe et une évaluation plus poussée.

(JCCA. 2023;67(1):97-100)

MOTS CLÉS : rate, calcifications, lupus érythémateux disséminé

¹ Chiropractic Department, D'Youville University,

Corresponding author: Lauren J. Tollefson, DC, BS, DACBR, Chiropractic Department, D'Youville University,
320 Porter Ave; Buffalo, NY 14201
Tel: 218-280-9640
E-mail: tollefs1@dyc.edu

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The authors have no disclaimers, competing interests, or sources of support or funding to report in the preparation of this manuscript. Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Case presentation

A 47-year-old female with known history of systemic lupus erythematosus (SLE) and fibromyalgia diagnoses presented to a chiropractic clinic with right-sided lower back and right hip pain. The patient described the pain as sharp and constant and rated its severity as a 5 out of 10. She noted intermittent facial paralysis and numbness in her hands and feet. No facial rash or other clinical manifestations were present. The patient also had occasional joint pain and stiffness when she experienced flare-ups. Due to the history of lupus with prolonged corticosteroid use, a standard lumbar radiographic series was performed at the chiropractic clinic. Prolonged steroid use can result in many complications such as osteopenia and avascular necrosis.¹

A lumbar spine series was taken at the clinic (Figure 1) which demonstrated loss of bone density, mild degeneration, and calcification in the left upper quadrant. Figure 2, a magnified image of the left upper quadrant on the AP lumbopelvic projection, confirmed innumerable calcifications within the spleen. The calcifications appeared as distinct, round nodules measuring 2-3mm in diameter.

Discussion

Etiology of left upper abdominal quadrant calcification can include *Mycobacterium tuberculosis* infection, *Histoplasma capsulatum* infection, pleomorphic sarcoma, hemangioma, angiosarcoma², along with SLE. In SLE, the pattern of calcification is typically widely distributed, small, round, calcified nodules in a random and scattered pattern in the spleen.³ Due to the distinct calcification pattern and patient history, the radiologist confirmed the calcifications in this case were due to SLE. The key imaging features and differential diagnoses for diffuse, punctate splenic calcifications are listed in Table 1.

Intervention and outcome

The patient was referred to her primary care physician for management of the splenic findings and evaluation for pneumococcal vaccination. Splenic calcification may foreshadow autosplenectomy and hyposplenism.³ Hyposplenic individuals are particularly vulnerable to encapsulated bacterial infections such as those caused by pneumococcal bacteria; this emphasizes the need for pneumococcal vaccination.⁴ The patient continues to be treated by a chiropractor for her musculoskeletal complaints.

This patient had no evident cause for the splenic calcifications except for her known SLE. Splenic calcifications are a rare finding, but the distinct pattern can be a key aid in diagnosis.⁵ Although this finding is rare, patients should be co-managed with the primary care provider for pneumococcal vaccination and to manage any concurrent systemic manifestations. It is important for chiropractors to properly investigate new and rare symptoms, especially in clinical situations where there are pre-existing conditions, and to know the proper medical professional to refer to in such cases.

SLE is a chronic, complex autoimmune inflammatory disease that can affect any part of the body and have various manifestations. Musculoskeletal complaints are extremely common in patients with SLE, most patients seek medical attention for joint pain.⁶ Chiropractors must be aware of the potential manifestations that can arise due to SLE and subsequent corticosteroid treatment such as loss of bone density⁷, potential for avascular necrosis⁷, and various vascular deficiencies⁶ that may arise as a result of SLE. Any contraindications to care such as vertebral-basilar insufficiency, osteoporosis, or osteomyelitis⁸ must be ruled out before proceeding with treatment.

Key messages

- Splenic calcifications are a rare, yet important finding in patients with SLE
- The etiology of splenic calcifications can usually be determined by patient history along with the pattern of the calcifications
- Patients with this finding should be co-managed with their PCP for pneumococcal vaccination



Figure 1.

AP lumbopelvic and lateral lumbar spine radiographs demonstrating osteopenia, mild degenerative changes, and left upper quadrant calcifications.



Figure 2.

Magnified image of the left upper quadrant demonstrating innumerable 2-3 mm calcifications within the spleen.

Table 1.
Differential diagnoses for diffuse, punctate splenic calcifications and key imaging features

Differential Diagnoses	Key imaging features
<i>Mycobacterium tuberculosis</i> or <i>Histoplasma capsulatum</i>	Diffuse calcifications without associated mass; scattered punctate calcifications ²
Pleomorphic sarcoma; hemangioma; angiosarcoma	Mass with internal calcifications; punctate calcifications ²
Systemic Lupus Erythematosus	Widely distributed, small, round, calcified nodules in a random and scattered pattern ³

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