Clinical image

A pathognomonic calcification pattern in chronic splenic brucellosis

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A 75-year-old male farmer presented for an abdominal CT scan because of a nonspecific, longstanding abdominal discomfort, fatigue and appetite loss. Although there were no other remarkable imaging findings, an unusual pattern of multiple, thinly, concentrically lamellated calcifications resembling targets was found in the spleen (Fig. 1A), also characterized on a further MRI work-up (Fig. 1B). Such isolated radiological finding raised suspicion of brucellosis. Laboratory tests for tuberculosis, histoplasmosis, HIV, and echinococcosis were all negative. A diagnosis of isolated splenic brucellosa was made on the basis of a positive Brucella IgG ELISA test, clinical history, and imaging findings.

Hepatosplenic involvement is common during the course of acute brucellosis (up to 60% of patients) and usually manifests as hepatosplenomegaly or mild increase of hepatic enzyme levels secondary to a nonspecific or granulomatous hepatitis, with good prognosis. 1 Chronic brucellar hepatosplenic abscesses (brucellomas) are rare (about 2% of cases), being considered true focal complications. Isolated brucellar splenic abscesses are even rarer, with only about 20 cases reported. 2

Peripheral or central gross calcifications with a snowflake appearance are a common finding in hepatosplenic brucellomas (83–100% of cases), 1 although absolutely nonspecific. Early radiograph descriptions, however, have reported on a characteristic concentrically lamellated pattern of splenic calcifications in chronic brucellosis, 3 which unfortunately has not been demonstrated after the advent of CT; 1 probably due to the rarity of splenic brucellomas and the much larger trend for an uncharacteristic gross appearance. Thus, to the best of our knowledge, this is the first report to demonstrate CT and MRI findings of this pathognomonic pattern of calcifications in splenic brucellomas since its earlier radiographic descriptions. Although exceedingly rare, awareness of this typical pattern may be useful for raising clinical suspicion, especially because diagnosis of chronic brucellosis may be sometimes misleading due to nonspecific clinical presentation.

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Fig. 1 – CT and MRI findings in a case of isolated chronic splenic brucelloma. Unenhanced CT (A) and fat-suppressed T2-weighted MR (B) images demonstrate multiple, thinly, target-like, concentrically lamellated calcifications in the spleen, a pattern considered characteristic for this diagnosis.

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Conflicts of interest

The authors declare no conflicts of interest.

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