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Splenic Tuberculosis

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ABSTRACT

Introduction: *Splenic tuberculosis is a rare hematopoietic localization of this infectious pathology. Representing 1% of all tuberculosis sites and 10% of extrapulmonary localizations (1). Herein, we present a case discovered incidentally during splenectomy for splenic tuberculosis.*

The aim of our study *is to highlight the diagnostic challenges and evaluate the role of surgery in its management.*

Patient & Observation: Patient Information: *A 37-year-old male, known case of schizophrenia under treatment, chronic smoker with a history of 10 pack-years, occasional alcohol consumer, and cannabis user. His symptoms began a year prior to admission with left hypochondrial abdominal pain, progressively worsening, non-radiating, with associated chronic constipation, no external gastrointestinal bleeding, all occurring amidst a febrile sensation and general deterioration marked by asthenia, anorexia, and a weight loss of 15 kg over 6 months.*

Keywords: Splenectomy, splenic tuberculosis, abdominal tuberculosis.

Upon general examination, the patient was conscious, hemodynamically, and respiratory stable, afebrile, with a performance status (PS) of 2; physical examination revealed splenomegaly estimated at 18 cm in its long axis, without signs of portal hypertension or peripheral lymphadenopathy; the rest of the somatic examination was unremarkable.

Laboratory investigations showed hemoglobin of 7.8 g/dL, leukocyte count of 7960/µL, and platelet count of 342,000/mm3, with no other notable abnormalities. Abdominal ultrasound revealed an enlarged spleen measuring 17 cm in its long axis, with a large central collection without distinct walls, irregular contours, and finely echogenic content, exerting a mass effect on the left kidney.

Abdominopelvic computed tomography (CT) detected splenic enlargement (splenic arrow at 27 cm) with a large, well-defined, lobulated, heterogeneously enhancing mass in the lower pole, with a central zone of liquid density. This mass exerted a

mass effect on neighboring organs, with enhancement characteristics suggestive of a splenic hemangioma, yet infectious or tumoral origins couldn't be excluded.

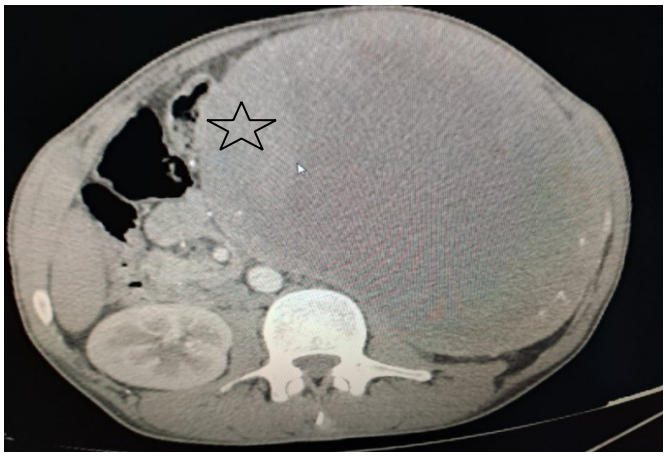

Figure 1: Axial CT scans at the abdominal level showing an enlarged spleen with a collection (*).

Due to diagnostic uncertainty, the patient was referred for surgery. Consequently, he underwent splenectomy with drainage of the left subphrenic space using an aspirating Redon drain. Intraoperatively, a spleen measuring 30 cm in its long axis with an intra-splenic abscess was found.

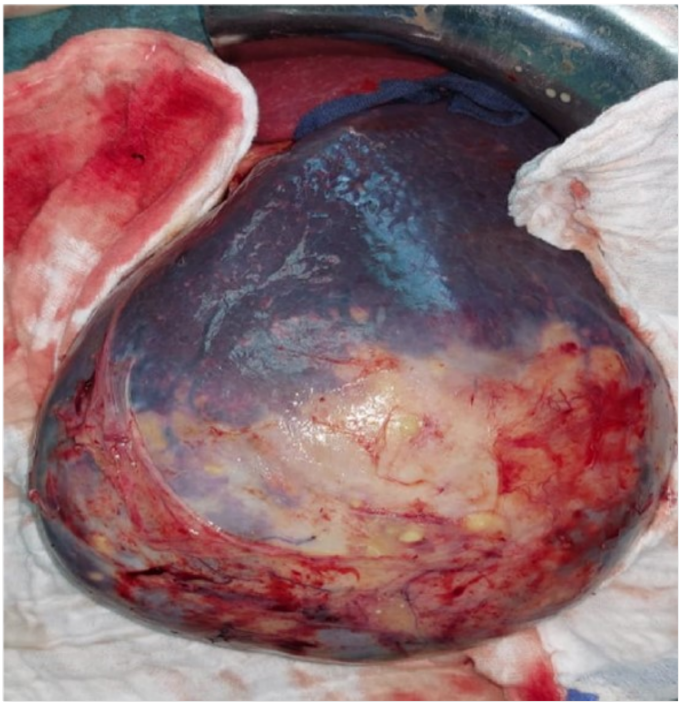

Figure 2: Intraoperative image of the splenic mass.

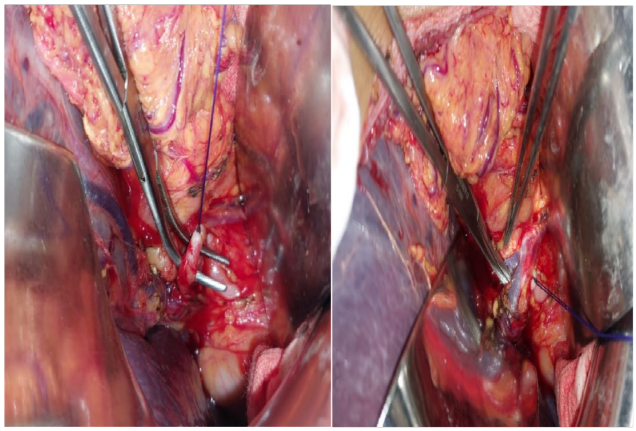

Fig- A: Ligature of the

Fig- B: Control of the

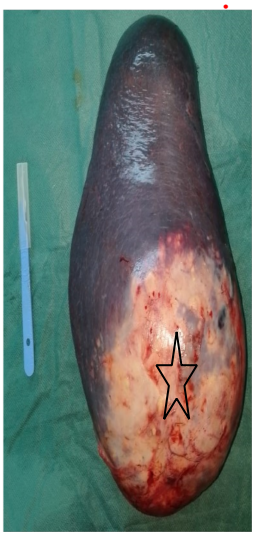

Figure 4: Image of the splenectomy specimen with intra-splenic collection (*).

Postoperative course was marked by fever up to 38.5°C, for which the patient received empirical antibiotic therapy, subsequently adjusted according to antibiogram results. He became afebrile and was discharged on the 6th postoperative day with twice-daily penicillin G injections. Vaccination against pneumococcus, meningococcus, and Haemophilus influenzae type B was administered 15 days after the intervention.

Histopathological examination of the spleen revealed tuberculoid granulomatous inflammation.

Discussion: Most often, splenic tuberculosis occurs within a context of diffuse involvement, particularly hepatic, nodal, and medullary (hematopoietic)

(2,3).

This localization seems to be favored by advanced age, diabetes, malnutrition, certain hematological disorders, and HIV.

Clinical manifestations of splenic tuberculosis are varied and nonspecific. Weight loss, fever, and anemia are the most common presentations (4,5). Splenomegaly and hepatomegaly are present in almost all cases (6). Some malignant forms are characterized by rapid evolution, often fatal.

The clinical picture may mimic certain parasitic diseases such as malaria, schistosomiasis, brucellosis, or a hematological disorder, notably acute leukemia.

On ultrasound, splenic tuberculomas appear as hypoechoic lesions of variable sizes with clear boundaries, without posterior enhancement. However, this pseudo tumoral macro-nodular form can pose genuine diagnostic challenges, especially in the absence of known tuberculosis sites or suggestive contexts, as in the case of our patient (7,8). In CT, tuberculomas are usually hypodense, homogeneous, not enhanced by intravenous contrast, sometimes with a hyper vascularized peripheral rim. In splenic abscess, CT sensitivity approaches 90 to 100%.

The diagnosis of splenic tuberculosis is histological and relies on biopsy of the spleen if accessible. Its specificity can reach 100% (10). It should be systematically performed in the presence of splenomegaly associated with unexplained fever, allowing for early diagnosis and initiation of medical treatment, which can be effective alone. Analysis of biopsy specimens provides evidence of infection by Mycobacterium tuberculosis, characterized by the presence of epithelioid granulomas with caseous necrosis (1,9).

The treatment of splenic tuberculosis is primarily medical, based on the combination of three antibiotics: rifampicin (R), isoniazid (H), and pyrazinamide (Z) for a total treatment duration of six months (11,12). Additionally, surgical treatment may be considered for diagnostic or therapeutic purposes. Diagnostic splenectomy, as in our patient, may be the only means to confirm the diagnosis when all investigations remain inconclusive. Therapeutic splenectomy is indicated in cases of treatment failure, polycythemic or cytopenic forms of splenic tuberculosis, tuberculosis splenomegaly complicated by gastrointestinal bleeding due to portal hypertension, failure of percutaneous drainage of a splenic abscess, or when multiple abscesses of the spleen are present (13,14).

Conclusion: Splenic tuberculosis, especially in its pseudo tumoral form, is a rare condition with a definitive diagnosis relying on histological and/or bacteriological confirmation. It should be considered in any case of splenomegaly with prolonged fever, even in immunocompetent patients. Treatment is primarily medical, with diagnostic and therapeutic splenectomy indicated in cases of diagnostic uncertainty or complicated or refractory forms.

Summary :

Splenic tuberculosis is a rare entity, particularly in immunocompetent individuals. We report the case of a 37-year-old man presenting with atypical left hypochondrial pain evolving over 6 months, with

ultrasound revealing a spleen measuring 17 cm in its long axis hosting a central collection, subsequently confirmed by CT to be a 27 cm splenic mass in the lower pole. Due to diagnostic uncertainty, the patient underwent splenectomy, with histopathological findings consistent with necrotizing tuberculoid granulomatous inflammation.

References:

1. Jabri H, Lakhdar N, El Khattabi W, Afif H. Les moyens diagnostiques de la tuberculose 2016. Rev Pneumol Clin. 2016 Oct;72(5):320–325.
2. World Health Organization Global tuberculosis report. 2020.
3. Adil A, Chikhaoui N, Ousehal A, Kadiri R. La tuberculose splénique à propos de 12 cas. Ann Radiol. 1995;38(7-8):403–7.
4. Berady S, Rabhia M, Bahrouch L, Sair K, Benziane H, Benkirane H, et al. Isolated tumoral tuberculosis of spleen (Report of a case) La revue de médecine interne. 2005;26(7):588–591.
5. Adil A, Abdelouafi A, Kadiri R. La tuberculose hépatosplénique pseudo tumorale: à propos de quatre observations. Radiologie J CEPUR. 1998;18:17–20.
6. Danon O, Mofredj A, Cava E, Nguyen V, Harry G, Cadranel JF. Infarctus splénique révélant une tuberculose abdominale. Gastroenterol Clin Biol. 2000;24(2):240-241.
7. Abitbol V, Paupard T, Etienney I, Patey O, Guez C, Oberlin P, et al. Aspects cliniques et radiologiques des abcès spléniques tuberculeux : présentation de trois cas. gastroentérologie Clin Biol. 1996;20(6-7):597–600.
8. Rhazal F, Lahlou MK, Benamer S, Daghri JM, Essadel E, Mohammadine E, et al. Belmahi. Splenomegaly and splenic pseudotumor due to tuberculosis: six new cases. 2004;129(8):410–414.
9. Mazloum W, Marion A, Ferron C, Lucht F, Mosnier Jf. Tuberculose splénique (à propos d´un cas et revue de la littérature) Med et Mal Infect. 2002;8:444–446.
10. Pottakkat B, Kumar A, Rastogi A, Krishnani N, Kapoor VK, Saxena R. Tuberculose de la rate comme cause de fièvre d'origine inconnue et de splénomégalie. Gut Liver. 2010;4(1):94–97.
11. Canova CR, Khun M, Reinhart WH. Problemebei der diagnose und Therapie der Lymphknoten-tuberkulosebei HIV-negativenpatienten. Schweiz MedWochenschr. 1995;125(51-52):2511–7.
12. Organization WH . World Health Organization. 2010. Treatment of Tuberculosis: guidelines.
13. T. Khalil, I. Uzoaru, V. Nadimpalli, R. Wurtz Splenic tuberculous abcess in patients positive for human imminodeficie virus: report of two cases and review Clin Infect Dis, 14 (6) (Jun 1992), pp. 1265-1266
14. E. deBree, D. Tsiftsis, M. Christodoulakis, G. Harocopos, G. Schoretsanitis, J. Melissa s Splenic abcess: a diagnostic and therapeutic challenge Acta Chir Belg, 98 (5) (Oct 1998), pp. 199-202.