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Case Report

Case Report: Splenic Abscess complicating a Primary Biliary Cholangitis (PBC) - A Rare Clinical presentation

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Abstract

Splenic abscess is an infectious collection arising from hematogenous or contiguous infections. It is a rare condition, predominantly affecting males and immunocompromised individuals. Currently, there is no consensus regarding the disease's management, including microbiological diagnosis and treatment. The preferred imaging test remains the CT scan, which exhibits excellent sensitivity (95%) and specificity (92%) [1]. It can also facilitate diagnostic punctures. Microbiological diagnosis relies on positive blood cultures, found in 24% to 80% of cases. Abscesses can complicate various immunosuppressive conditions. Diagnosis is often delayed due to clinical and biological presentations mimicking a relapse of the primary pathology [2].

We present the case of a 75-year-old woman diagnosed with ischemic heart disease in 2021 under treatment; the patient was recently diagnosed with primary biliary cholangitis (PBC) in March 2023, leading to the initiation of ursodeoxycholic acid (UDCA) at a dose of 13 mg/kg, resulting in significant clinical and biochemical improvement; The patient presented with a febrile syndrome, four months after the diagnosis of PBC; after all the necessary biological tests and additional examinations ; the diagnosis of a splenic abscess was confirmed, the patient was put on antibiotic therapy with good clinical and biological improvement.

Keywords: Primary Biliary Cholangitis (PBC);

Introduction

A splenic abscess refers to the formation of pus within the spleen, arising either from an intrinsic infection, or as a result of hematogenous or contiguous infection. What makes this condition particularly noteworthy is its rarity and severity, attributed to its complications and the risk of rapid dissemination, In Europe, the prevailing approach to treatment tends to be radical, despite the current trend favoring more conservative methods.

Several predisposing factors are commonly associated with splenic abscess, including HIV infection, intravenous drug use, immunosuppressive drugs, underlying chronic liver disease, pancreatic cancer, and chronic alcohol intoxication. Notably, in primary biliary cholangitis (PBC), the immune system gradually and irreversibly damages the bile ducts within the liver, a process referred to as “autoimmune”.

Observation

Mrs F.N aged 75-year-old, previously diagnosed with ischemic heart disease in 2021, with preserved left ventricular ejection fraction (LVEF), and currently on aspirin (100mg), ACE inhibitor (5/5mg), and atorvastatin (10 mg/day). Additionally, the patient was recently diagnosed with primary biliary cholangitis (PBC) in March 2023, leading to the initiation of ursodeoxycholic acid (UDCA) at a dose of 13mg/kg, resulting in significant clinical and biochemical improvement.

The patient presented with a febrile syndrome, four months after the diagnosis of PBC. The fever spiked up to 40°C without any associated gastrointestinal or extraintestinal symptoms. Upon admission, the patient was conscious, febrile at 39°C, hemodynamically and respiratorily stable, with no jaundice, and a supple abdomen. Epigastric and right hypochondrial tenderness were noted upon palpation, but no organomegaly or dullness was detected.

Initial laboratory investigations revealed anemia (8.7 g/dl) with normocytic hypochromia and iron deficiency, hyperleukocytosis 14980/mm^3 primarily consisting of neutrophils 11230/ mm3, elevated CRP 251 mg/l, and positive procalcitonin 17.3 ng/ml. Liver function tests indicated elevated total bilirubin 5 mmol/l, PAL at 1.2 times the normal range, and GGT at 6 times the normal range. GOT was elevated at 2.8 times the normal range, while GPT was normal. Ionogram and renal function were within normal limits.

In the context of the infectious syndrome, various tests were conducted, including a chest radiogram (which showed no abnormalities), sterile urine cytobacteriological examination, multiple sets of blood cultures (all negative), normal fungal workup, and unremarkable skin and sinus examinations. An Ultrasound (Figure 1) and CTAP scan (Figure 2) revealed a non-collected, superinfected splenic infarction, infiltration of mesenteric fat, and thickening of peritoneal leaflets with an infectious appearance. The liver appeared normal in size, with a regular contour and homogeneous echostructure, and no focal lesions were observed. Additionally, there was no dilation of the biliary and hepatic vessels.

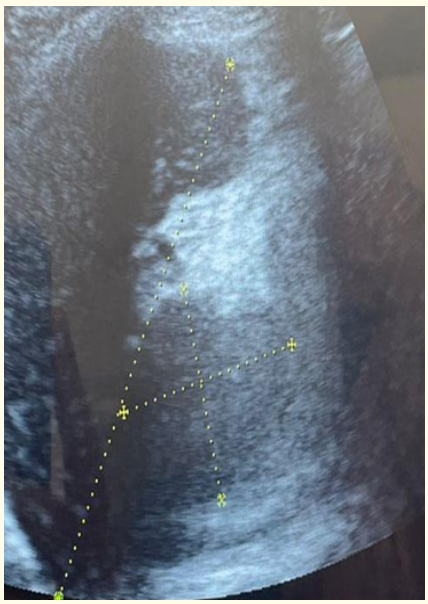

Figure 1: Ultrasound image of a splenic abscess.

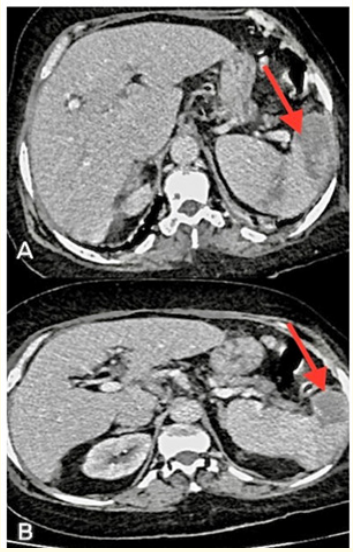

Figure 2: CT image of a splenic abscess.

Considering the splenic lesions, infective endocarditis was initially suspected; however, this diagnosis was ruled out after a thorough cardiac examination, including a transthoracic echocardiogram (TTE). Diabetes was excluded based on normal glycemic cycles and a glycated hemoglobin level of 5%. A physiological workup, including 3BK and IDR with a thoracic CT scan, eliminated the possibility of tuberculosis. HIV serology returned negative.

Therapeutically, the patient was rehydrated, and empirical antibiotic therapy with ceftriaxone (2g/day) and metronidazole (1.5g/day) was initiated. The patient's condition improved, marked by the resolution of the febrile syndrome and significant biochemical improvement. Follow-up investigations revealed an increase in hemoglobin levels to 9.4 g/dl, white blood cell count to 5370, and a negative CRP at 10. Liver function tests showed improved transaminases with PAL within the normal range, GGT at 4.6 times the normal range, and total bilirubin at 5.

The patient was discharged on antibiotics for four weeks following a 15-day course of intravenous treatment in the hospital. UDCA at 13 mg/kg and the prescribed treatment for ischemic heart disease were continued.

Discussion

The pathophysiology of splenic abscesses is multifaceted, rooted in several theories. The hematogenous theory posits that the spleen becomes infected during severe septicemia, while the intrinsic theory suggests that infections arise from alterations in splenic structure or function, such as infarction or splenic hematoma [3]. The extrinsic theory, on the other hand, implicates contamination of the spleen by neighboring infections. In our patient, the second theory gains relevance, notably due to her autoimmune pathology, primary biliary cholangitis [4].

The symptomatology of splenic abscess is diverse. While painful, febrile splenomegaly is a potential indicator, it is not consistently present. Sometimes, the symptoms manifest as a persistent infectious syndrome, as observed in our patient, or as a deteriorated general condition, leading to a diagnosis based on imaging. In this context, both computed tomography (CT) and ultrasound serve as reliable diagnostic tools, revealing hypodense or hypoechoic images with posterior enhancement, either single or multiple within the splenic parenchyma [5].

Regarding treatment strategies for splenic abscesses, a probabilistic antibiotic therapy forms the cornerstone, subsequently adjusted based on bacteriological results. This approach is often coupled with ultrasound-guided puncture, percutaneous drainage, or, in severe cases, splenectomy [6,7]. Percutaneous drainage holds a distinct advantage, effectively reducing hospital stays and preventing peritonitis resulting from abscess rupture. Furthermore, this method preserves splenic parenchyma, with a commendable cure rate ranging from 70 to 100% [8,9]. Noteworthy considerations for successful drainage involve single, non-partitioned collections with a thin wall, as emphasized by Gleich [9]. In contrast, splenectomy remains a viable option in cases of partitioned or multiple abscesses, failure of percutaneous treatment, or complications associated with the abscess, as highlighted by Fall [10] and Rotman [11].

The predominant pathogens implicated in splenic abscesses are encapsulated bacteria, with pneumococcus accounting for 50-80% of infections, Haemophilus influenzae for 5-15%, and meningococcus for a notable percentage [12,13]. Consequently, preventive measures in splenectomized patients include vaccinations against pneumococcus, Haemophilus, and meningococcus. Additionally, long-term anti-pneumococcal antibiotic prophylaxis with penicillin V is recommended to mitigate the risk of these infections.

Conclusion

The diagnostic and therapeutic management of splenic abscess remains a challenging domain, lacking precise guidelines. Vigilance is paramount due to the often severe and unpredictable natural course of the condition, particularly in the context of immunosuppressive etiologies. Primary biliary cholangitis stands out in this category, given its potential for autoimmunity and its significant impact on biliary drainage [14]. As a result, heightened awareness of the infectious complications arising from this condition is crucial. Clinicians must remain diligent, exercising precision and care in their approach to diagnosis and treatment to ensure optimal outcomes for patients affected by splenic abscess, especially those with underlying immunosuppressive disorders.

Bibliography

1. Vilde JL. "Pathophysiology of infections after splenectomy". *Chirurgie* 102 (1982): 322-326.

2. Echarrab M., *et al*. "Abscesses of the spleen. A propos de 10 observations". *Médecine du Maghreb* 85 (2001): 55-57.

3. Gassaye D., *et al*. "Abscesses of the spleen. A propos de 13 cas". *Médecine d'Afrique Noire* 1 (2000): 41-43.

4. Loussaief C., *et al*. "Pyogenic abscesses of the spleen. A propos de 8 cas". *La revue de Médecine Interne* 7 (2005): 541-544.

5. Fall B., *et al*. "Abscesses of the spleen in 5 cases". *Chir* 128 (1991): 256-259.

6. Chun CH., *et al*. "Splenic abscess". *Medicine* 59 (1980): 60-65.

7. Ki-Zerbo GA., *et al*. "Salmonella typhi splenic abscess: à propos d'une observation au CHNSS de BoboDioulasso". *Médecine d'Afrique Noire* 5 (1999): 283-285.

8. Gleich S., *et al*. "A review of percutaneous drainage in splenic abcess". *Surgery, Gynecology and Obstetrics* 167 (1986): 211-215.

9. Delattre JF., *et al*. "Percutaneous drainage in collections of the abdomen". *Emémoires de l'Académie Nationale de Chirurgie* 2 (2003): 50-54.

10. Rotman N., *et al*. "Abscesses of the spleen: diagnosis and treatment. A propos de 12 cas". *Annales de Chirurgie* 3 (1989): 203-206.

11. Kyaw MH., *et al*. "Evaluation of severe infections and survival after splenectomy". *The American Journal of Medicine* 119 (2006): 276-282.

12. Beytout J., *et al*. "Asplenia and hyposplenia". *Presse Medicine* 32 (2003): 355-359.

13. Legrand A., *et al*. "Prévention du risque postoperative infection in splenectomized patients". *Annales Françaises d'Anesthésie et de Réanimation* 24 (2005): 807-813.

14. Dumont J. "Infections after splenectomy: vigilance is still required". *Hématologie* 2 (2006): 9.