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Surgical Research

Splenic Abscess in Children: Management at Department of Ignace Deen's General Surgery, University Hospital Center (Chu-Ignace Deen)

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ABSTRACT

Introduction: *Splenic abscess is a less common and serious condition in children, especially when diagnosed late. Nowadays, imaging plays an important role in diagnostic confirmation and therapeutic guidance. Medical and surgical management is complex.*

The objective was to present two cases of splenic abscess, rarely encountered in our practice at this age.

Clinical Case: *It's about two children, all male, aged 7 and 9, living in a rural area, referred and hospitalized to our department for a splenic abscess.*

They presented with left subcostal pain accompanied by fever and splenomegaly. They were followed in pediatrics for treatment of malaria, typhoid, and anemia, with no positive results. Upon admission, they presented with a deteriorated general condition, with anorexia, asthenia, and fever. Swelling and firm arching of the left hemiabdomen were observed; this was grade 4 splenomegaly. Ultrasound revealed an enlarged and abscessed spleen. Leukocytosis and anemia were observed. Widal serology was strongly positive, as was the thick smear. Blood glucose and retroviral serology were normal. The patients had no sickle cell disease or abdominal trauma. A midline laparotomy above and below the umbilical nerve revealed a splenic abscess. We performed a total splenectomy. Pus was collected for culture, and the spleens were referred to a pathologist. Antibiotics and analgesics were administered. The patients were discharged with a favorable outcome.

Conclusion: *Splenic abscesses are rare; Their causes are numerous and varied, and the initial clinical picture is misleading. Total splenectomy is the most reassuring treatment for late-diagnosed abscesses.*

Keywords

Splenic abscess, Splenomegaly, Surgery.

Introduction

Splenic abscesses are purulent collections of the spleen. This condition is rare in children, more common in men, and particularly in immunocompromised patients [1].

Splenic abscesses are serious when diagnosed late. Symptoms are polymorphic. They most often involve painful and febrile splenomegaly. This symptomatic triad can be inconsistent [2]. Nowadays, imaging plays an important role in diagnostic confirmation and therapeutic guidance [3]. Several therapeutic options exist. Splenectomy often remains the only option in the tropics. Its prognosis is poor if left untreated [4]. Monitoring difficulties and the high risk of spontaneous abscess rupture into the abdominal cavity are challenges encountered in our practice. Mortality is approximately 15% despite treatment. The authors emphasize the rarity and often delayed diagnosis despite advances in modern imaging [5]. The objective was to present the results

of the management of two splenic abscesses encountered in our practice at this age.

Clinical Case

It's about two boys, aged 7 and 9, consulted for abdominal pain accompanied by fever. The onset of the illness, reported at the ages of 2 and 3 weeks, was marked by left subcostal pain accompanied by nausea, vomiting, and fever. They had been examined in two peripheral facilities and treated for malaria and typhoid, with no positive results. The persistence of pain and the development of a persistent cough prompted a consultation in our department. The patient's general condition was impaired: physical asthenia, anorexia, weight loss, insomnia, and fever of 38.7°C and 39°C. Blood pressure and pulse were normal; SaO2 was 96% and 98%.

In both cases, the abdomen was large with a pronounced arch of the left hemiabdomen. Examination of the cardiovascular, pleuropulmonary, and genitourinary systems was normal. Ultrasound revealed an enlarged spleen (grade 4 splenomegaly) with a multifocal abscess in one case. A leukocytosis of 14,000 g/L and anemia were observed, with Hb levels of 8 g/dL and 9 g/dL. Blood culture was accelerated, and CRP was elevated. The IDR test was negative. HIV and HbsAg serologies were negative. No patient had sickle cell disease. One of the patients received a blood bag containing the isorhesus isogroup and received dual antibiotic therapy (ceftriaxone and infused flagil), analgesics (infused acetaminophen), and rehydration solutions. Laparotomy revealed stage 4 splenomegaly with abscess in both cases. The patients underwent surgery, and the laparotomy revealed a splenic abscess. We performed a total splenectomy. Pus was collected for culture.

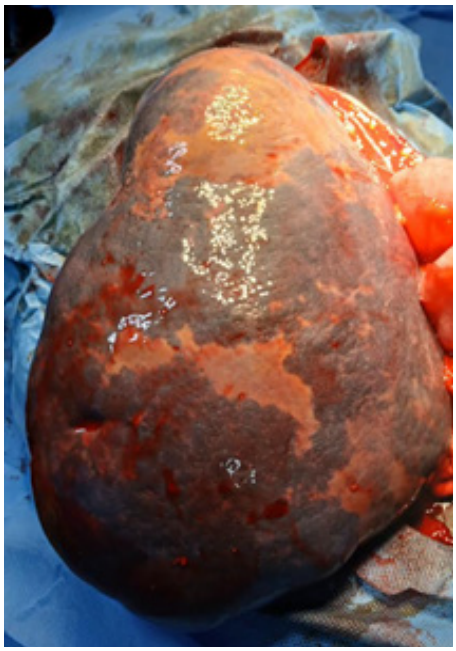

Figure 1: Intraoperative view: abscessed splenomegaly.

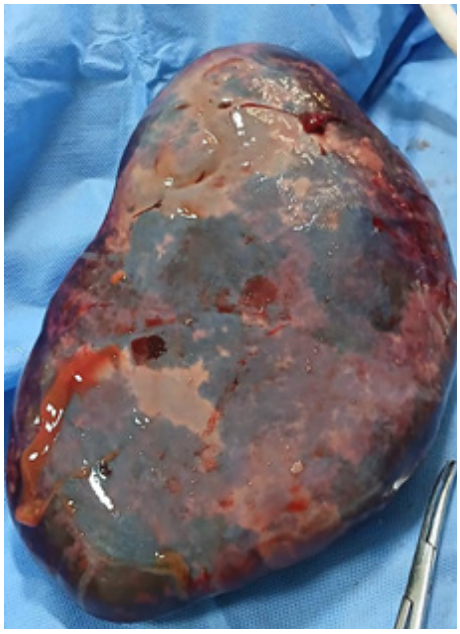

Figure 2: Post-splenectomy view of the spleen.

Discussion

Splenic abscess is a suppurative collection of the spleen, rare in children [1,4]. From our knowledge, these are the first cases reported this year.

The main routes of dissemination of splenic abscess are hematogenous spread from an infectious site (sepsis, endocarditis, or urinary tract infections) and contiguity in the form of a subdiaphragmatic abscess, sometimes secondary to trauma or disease (myocardial infarction, malaria, Crohn's disease, and immunosuppression) [6,7]. The symptomatology of splenic abscess is polymorphic, often associated with painful and febrile splenomegaly, but it is inconsistent. Clinical signs are often atypical at first, and a positive diagnosis is often based on the triad of pain, fever, and splenomegaly, reinforced by imaging (ultrasound and computed tomography). New imaging techniques represent a considerable diagnostic and therapeutic contribution [3].

Our patients were referred late; chest X-rays showed an elevation of the left diaphragmatic dome. The abscess diagnosis was confirmed by ultrasound (hypoechoic lesions). Late diagnosis can be responsible for significant mortality, while early treatment (splenectomy + antibiotics) allows for a cure.

In our case, pus culture revealed an infectious cause of Salmonella and Staphylococcus. The spleen is a rare visceral location in Salmonella typhi or non-typhi infections. Chronic malaria and sickle cell disease also promote this type of complication. Thus, the particularity of splenic abscess lies in its rarity and severity due to the risks associated with its spontaneous rupture in the abdomen and its spread to the bloodstream, leading to sepsis.

Treatment of a splenic abscess combines drainage with broad-

spectrum antibiotic therapy. Drainage can be performed percutaneously (under radiological control) or surgically. Percutaneous drainage could become an option for patients contraindicated for surgery [2,6].

However, in our case, given the diagnostic delay, the risk of abscess rupture, and the under-equipment of our technical platform, surgical intervention seemed the most appropriate. After splenectomy, children must be vaccinated to prevent bacterial infections (pneumococcus, Haemophilus influenzae, meningococcus), and patients must receive effective medical treatment. The prognosis was favorable in both of our patients.

Conclusion

Splenic abscesses are rare in our institution. Their etiology is considered infectious and the symptoms are often misleading at first. Splenectomy is the most reassuring treatment in our practice.

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