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Spontaneous rupture of the spleen: An unexpected cause and specific treatment

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Abstract

Non-traumatic (or spontaneous) ruptures of the spleen (NTRS) are difficult to diagnose and are potentially fatal.

The causes can be of infectious, tumoral or hematological origin. The classic treatment remains splenectomy but several recent studies have highlighted the benefit of conservative treatment.

We report the case of a young man aged 32 who presented with a spontaneous rupture of the spleen during a primary infection with the Epstein-Barr virus (EBV), well controlled by embolization of the splenic artery under local anesthesia. Thus, avoiding emergency splenectomy.

Keywords: AAST, non-traumatic, hemoperitoneum, non-surgical treatment

Introduction

The severity of NTRS Reflects in its extremely rare context sometimes leading to diagnostic and therapeutic delay ^[1], as well as risks linked to the underlying pathology ^[2, 3]. They can occur in a normal or pathological spleen. Treatment often consists of splenectomy, however with the advent of interventional radiology, and progress in resuscitation, splenic conservation is increasingly practiced ^[4].

Observation

This is a 32-year-old man with a history of a sleeve gastrectomy 5 years ago who consulted the emergency room for diffuse abdominal pain of sudden onset with a fever of 38.5.

Clinically: MAP 58, Fc 110 bpm, SpO2 97% in ambient air, generalized abdominal defense. Biologically: Hb: 8.5, Gb7.5G/L CRP 75.

An AP CT scan is performed urgently showing: hemoperitoneum on AAST grade III splenic fracture with an intraparenchymal hematoma of between 105 and 89 mm per location, subcapsular hematoma, hemoperitoneum of moderate abundance, and no active bleeding (Figure 1).



Fig 1: Abdominal CT scan with injection, in axial section: ruptured splenic subcapsular hematoma and hemoperitoneum (AAST 3)

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The course of action was to perform coil embolization of the splenic artery at its proximal part under local anesthesia (Figure 2) and transfusion.

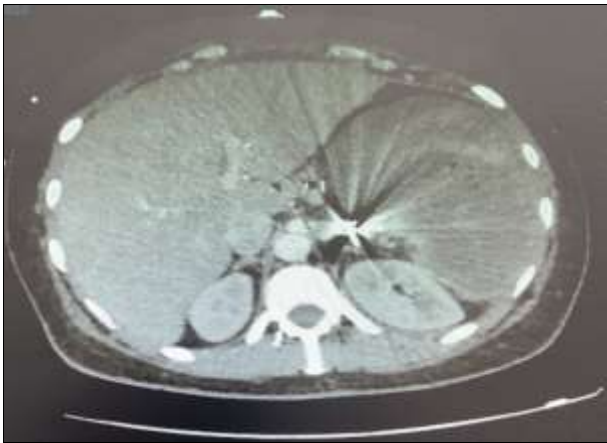


Fig 2: Abdominal CT scan C- in axial section: showing a coil at the root of the splenic artery.

The aftermath was simple with a control angioscan the next day showing: Stigmata from splenic embolization with infarction of approximately 75% of the spleen. No notable increase in subcapsular hematoma or diffuse hemoperitoneum.

The etiological research was in favor of infectious mononucleosis by EBV (positive EBV serology, in favor of a primary infection (Ig MVCA positive, Ig G VCA and Ig G EBNA negative).

Patient left the hospital on day 15 under analgesic treatment and prevention against infections.

Discussion

Spontaneous rupture of the spleen is rare outside of the post-traumatic context. Its prevalence in the general population is 0.1% to 0.5% [5]. Men are affected twice as often as women. The average age is 22 years but it can occur at any age [6]. In approximately a third of cases, there are signs of shock during the first examination. In 9% of cases, patients die before being operated on [6].

The causes of NTRS [7] are dominated by infectious diseases: IM and malaria (30%), hematological: malignant hematological diseases (27%), solid or benign tumors of the spleen (11%), digestive pathologies (Pancreatitis, portal hypertension) (10%), rheumatological causes (4%) and renal failure at the dialysis stage (3%). In almost 5% of cases, without obvious cause.

The typical form is acute and unpredictable, but there are progressive forms. The diagnosis is based on the clinic and abdominal CT scan [8]. The dogma of splenectomy tends to be replaced by a conservative medical and/or radio-interventional approach, in patients selected subject to strict clinico-biological criteria and prolonged clinical and radiological follow-up [9].

Conclusion

Spontaneous rupture of the spleen is an extremely rare medical-surgical emergency that can endanger the patient's vital prognosis. The abdominal scanner is an essential pillar for diagnosis and management. Thanks to. Advances in resuscitation and interventional radiology, hemostasis splenectomy is currently reserved for extreme cases, thus

avoiding induced immunosuppression with all its repercussions on the lives of patients.

Authors' Contributions

All the authors have actively participated in the redaction, the revision of the manuscript, and provided approval for this final revised version.

Informed Consent

Written informed consent was obtained from the patient.

Conflict of interest

Authors have no conflicts of interest to declare.

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