



Ruptured Huge Ectopic Spleen: A Case Presentation Review of Literature

Bayanduuren B*, Altankhuyag B, Enkhbayar D, Uyanga T, Bulgan CH and Mishigdorj L

Grandmed Hospital, Mongolia

Abstract

Introduction: The occurrence of an ectopic spleen is relatively common and observed in 10% to 30% of autopsy patient. Ectopic spleen is found in 10% to 15% of the population, and even more prevalent in patient with hematological disorders. Usually, accessory spleen is asymptomatic; torsion and infarction rupture with bleeding, and infection with abscess is a very rare complication. Rupture of an ectopic spleen is extremely rare, and requires prompt medical attention.

Case presentation: We report the case of 49 years, old female. Presenting with an upper recurrent abdominal pain and nausea, vomiting, dizziness. Pain is sudden onset presenting 5 days ago. Previously no pain and no history of family.

Blood examination: HGB=9 × 10 g/dl, RBC=3.10 × 10³/ul

Abdominal computed tomography: 8 cm × 5 cm × 4 cm well defined homogenous lesion in middle abdomen adjacent in the stomach wall. Free blood in peritoneal cavity.

Exploratory laparotomy, ectopic splenectomy. Large ectopic spleen adjacent stomach wall to vascular pedicle. Ruptured ectopic spleen with hemoperitoneum.

Keywords: Ectopic spleen; Rupture; Hemoperitoneum; Abdominal pain; Posteromedial position

Introduction

The ectopic spleen is a relatively common disorder and is diagnosed with 10% to 30% autopsy [1-2]. The population prevalence is 15% (1.5). Ectopic spleens are often located on the left side of the human body, especially occurs in the spleen area (splenic hilum/75%), 20% in the pancreatic Thailand 5% in the pancreas, kidney and kidney gland (5.8). Very rarely, it is diagnosed with ovaries, scrotum and mediastinum. The incidence of the outer wall of the stomach is rare [2-4]. Ectopic spleen is more likely to diagnose children and women 20 to 40 years old (1.5.9). Moreover, splenectomy for treatment of a wandering spleen account for less than 0.25% of splenectomy in reported series [5-7]. Ectopic spleen has its own link and its veins and is located in the foot (11.13). Diagnosis of abdominal ultrasound and computed tomography (16%) [1,8-11].

Case Presentation

A 49-year-old woman was admitted to the emergency department complaining of constant upper abdominal pain. Pain was sudden onset 5 days ago. The patient was normal (36.2°C), had tachycardia (118 beats/min) and blood pressure of 90 mmHg/60 mmHg. Physical examination revealed abdominal distention, predominantly in the epigastric region due to a tender mass causing dullness on percussion stomach. Laboratory findings normal leukocyte and platelets, decrease erythrocyte 3.100/mm³ and hemoglobin 9 g/l. abdominal ultrasound free fluid in abdominal cavity and pelvis. Esophagogastroduodenoscopy is normal limits. Emergency CT revealed absence of the spleen in its normal position, a homogeneous mass with no contrast enhancement pushing aside the sigmoid colon, free blood in the peritoneal cavity around the mass, and a normal urinary tract. The absence of the spleen in its normal position and the non enhancement of the pelvic mass made the diagnosis of an ectopic strangulated spleen undeniable. The spleen shows normal perfusion. A short tortuous vascular pedicle containing the splenic vessels is seen extending from the epigastric region to the prolapsed stomach. Size was 8 cm × 6 cm × 3 cm.

Surgery

The patient underwent emergency exploratory laparotomy. During surgery, the spleen was enlarged (8 cm × 6 cm × 3 cm), located on the stomach wall, attached to a normally elongated

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*Correspondence:

Bayanduuren B, Grandmed Hospital,
11 Khoroo Zaisan, Khan-Uul District,
Ulaanbaatar, Mongolia, Tel: +976-
99454525;
E-mail: mgl_bayanaa@yahoo.com

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Figure 1: Changes in upper gastrointestinal endoscopy Contrast computed tomography abdomen.



Figure 2D: Ectopic spleen/ovoid shape.



Figure 2A: Free blood in peritoneal cavity/Hemoperitoneum.



Intraoperative figure:
Figure 3A: Hemoperitoneum/arrow.



Figure 2B: 8 cm × 5 cm × 4 cm well defined homogenous lesion in middle abdomen adjacent in the stomach wall.

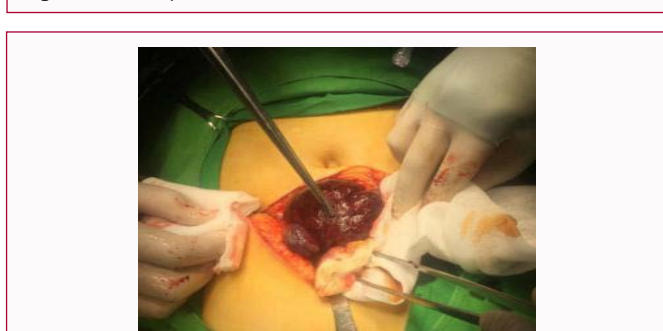


Figure 3B: Ectopic spleen.



Figure 2C: Ectopic spleen/vascular pedicle.

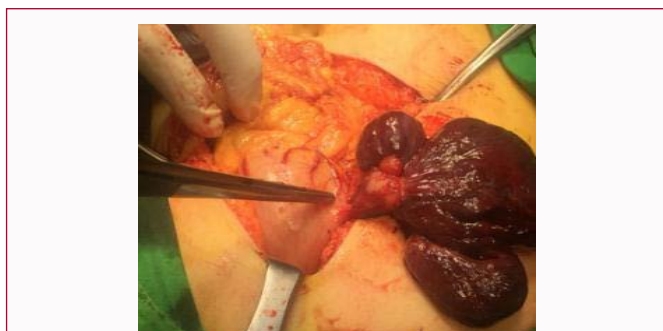


Figure 3C: Vascular pedicle of ectopic spleen.

pedicle (8 cm), and ruptured and hemorrhages this spleen. Generalized hemoperitoneum. The organ continued to appear non-viable and total splenectomy was performed. Irrigation and drainage of abdominal cavity. During exploration normal abdominal cavity. Histology revealed ectopic spleen with circulatory disorders and hemorrhage. The postoperative course was uneventful and the patient was discharged on the eighth postoperative day without any

complication. Vaccination against *Pneumococcus*, *Meningococcus* and *haemophilus influenzae* was administered two weeks after surgery.

Discussion

Ectopic spleen is a rarely diagnosed clinical entity [1-5]. This is found commonly, in 10% to 30% of autopsy studies, although patients are often asymptomatic and diagnosis is incidental to other

Table 1: Changes in complete blood count test.

CBC	Range	Result
WBC	4-10 × 10 ³ /ul	7.3 × 10 ³ /ul
HGB	11.5-17.0 g/dl	9 g/dl
RBC	3.8-6.5 × 10 ³ /ul	3.10 × 10 ³ /ul
PLT	150-500 × 10 ³ /ul	366 × 10 ³ /ul
HCT	34%-54%	27.60%

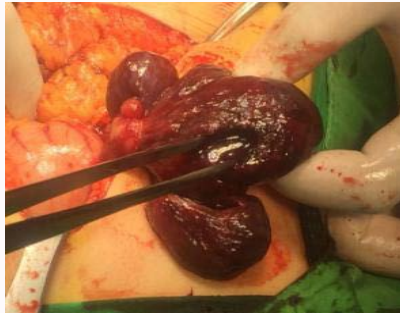


Figure 3D: Ruptured ectopic spleen on the stomach wall.

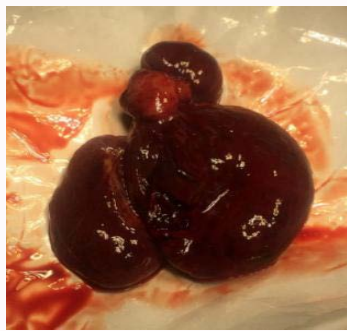


Figure 3E: Huge ectopic spleen.

abdominal pathology [5-7,12]. 500 cases of patients with recurrent abdominal pain or abdominal emergency caused by a wandering spleen have been reported in the literature (1.4). One of the first case reports of a ectopic spleen in a child was published in 1854 by

Table 2: Laparoscopic ectopic splenectomy cases.

Author	Age/sex	Clinical sign	Size Position
Mendi 2006	12/f	Left upper abdominal pain	<3 cm Splenic hilum
Yousef 2010	12/m	Left upper abdominal acute pain	3.5 cm Splenic hilum
Lhuire 2013	66/m	Chronic abdominal pain	3 cm Greater omentum
Perini 2014	17/f	Asymptomatic	6 cm Pelvic
Ozeki 2015	31/f	Left upper abdominal pain	3 cm Greater omentum

Table 3: Ectopic splenectomy cases using open technique.

Author	Age/sex	Clinical sign	Size Position
Valls 1998	13/f	Acute abdominal pain	6 cm Pancreatic tail
Grinbaum 2005	21/f	Left upper abdominal pain	9 cm Greater omentum
Yagmur 2008	34/m	Upper abdominal pain	10 cm Left colon
Impellizzeri 2009	12/m	Acute abdominal pain	8.5 cm Mesentery
Ishibashi 2012	3/f	Right abdominal pain	7 cm Greater omentum
Bard 2014	20/f	Left abdominal pain	17 cm Spleen
Koichi 2015	5/m	Left lower abdominal pain	8 cm Greater omentum

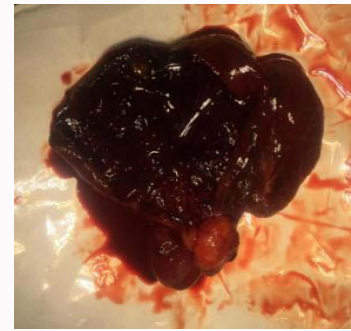


Figure 3F: Huge ectopic spleen with hemorrhage.

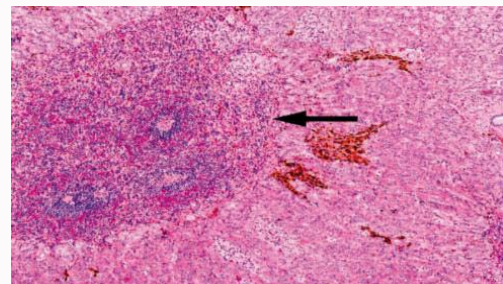


Figure 4: Ectopic spleen with circulatory disorders and hemorrhage.

the Polish physician Józef Di et al. in the Polish Journal “Pamiętnik Towarzystwa Lekarskiego Warszawskiego” (Diary of the Warsaw Medical Society) and in “Wiener Medizinische Wochenschrift” [13]. The spleen arises during the fifth week of embryogenesis as the mesenchymal tissue in the dorsal mesogastrium fuses [1,4-7]. Moreover, splenectomy for treatment of a wandering spleen account for less than 0.25% of splenectomy in reported series (5.7.10). Wandering spleen is 7 times more common in females than males after age 10 and 2.5 times more common in males than females under the age of 1 year (5-8.10). The most common age of presentation is childhood especially under 1 year of age followed by the third decade of life, and is more frequently seen in females of reproductive age (3-7.12). Koenraad J, Mortelet in the study three hundred and thirty-four patients (198 female and 136 male) with a mean age of 47.18 years

(SD 15.75), ranging from 13 to 82 years, were included in this study [1,8-11]. Out of 334 cases, 82 accessory spleens were detected in 63 patients (18.8%) fifty-six accessory spleens (68.3%) were of round shape, 20 accessory spleens (24.4%) were oval in shape, 5 (6.1%) were triangular, and only one single accessory spleen (1.2%) was heart shaped (5.9.11). The maximum diameter range was 3 mm to 79 mm, with a mean diameter of 14.7 mm (6.8.13). Our case was large size 8 cm × 6 cm × 3 cm and round shape [8-12].

Conclusion

Ectopic spleen is commonly misdiagnosed until the manifestation of complications in adulthood. We were diagnosed before the surgery. The patient was completely healed.

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