

Ectopic pelvic spleen. Presentation of two cases

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Summary

We present two cases of nulliparous women with ectopic pelvic spleens who were hospitalized in our department during the last decade. The clinical and laboratory characteristics and the management of such a rare entity are discussed.

Key words: Spleen; Ectopic; Pelvis.

Introduction

The normal location of the spleen is the left hypochondrium. It is attached by the gastrosplenic and splenorenal ligaments. According to autopsic studies, accessory spleens may be found in 10% to 15% of the population [1]. The ectopic spleen is a migration of the spleen from its normal anatomic location because its ligaments have not developed properly. The spleen can migrate anywhere in the abdomen or pelvis [2]. After splenorenal fusion, they can be found pararenally and retroperitoneally, and after splenogonadal fusion they can descend into the pelvis or scrotum [1].

The case of ectopic pelvic spleen is a rare condition in which the spleen can be found in the pelvis. The symptoms depend on spleen size and/or torsion of its peduncle. More specifically, the enlarged spleen might press the gastrointestinal tract and/or the bladder, whereas torsion could present with symptoms of acute abdomen, especially with hypogastric pain. The preoperative diagnosis is difficult to make and is based on radiological (ultrasound and computed tomography) features.

We carried out a retrospective search in the archives of our department and found two cases of ectopic pelvic spleen in a ten-year period (1997-2007).

Case Reports

Case 1

A single, nulliparous woman aged 21 was hospitalized in our department due to pervasive hypogastric pain mainly localized in the left iliac fossa. Her history was free of disease. She declared that her menarche was at 14 years old. She had a normal cycle of 28-30 days and her last period was 11 days before the beginning of symptoms. The uterus was found to be of normal size but a soft tissue mass was palpated in front of it. The adnexa were also of normal size. Laboratory controls revealed hematocrit: 40%, hemoglobin: 13.3%, WBC: 7500/ml (neutrophils: 55% and lym-

phocytes: 41%), urea: 28% and glucose: 84%. Urine test was normal and pregnancy test was negative. Intravenous pyelogram revealed double renal calyces bilaterally with a recess in the bladder. Transvaginal ultrasound (TVS) showed an oval mass, 10 cm in diameter, in the bladder base. Differential diagnosis included an ovarian dermoid cyst or endometrioma. Computed tomography (CT) confirmed the diagnosis of a pelvic mass and showed the absence of the spleen in its normal position. Laparotomy was performed and the uterus and adnexa were normal. However, an ectopic spleen two times larger than normal size was found in the space between the uterus and the bladder. Splenectomy was performed. Histology showed a spleen which weighed 380 g and was 17 x 9 x 6 cm in size. The structure was normal but it was characterized by increased hyperemia (Figure 1).

Case 2

A single, nulliparous 17-year-old woman was hospitalized in our department due to acute hypogastric pain and hyperemesis. Her history was free of disease. She declared that her menarche was at 15 years old. She had a normal cycle of 28-35 days and her last period was 18 days before the beginning of the symptoms. She was examined through the rectum because she was a virgin and examination of the cervix was painful. The uterus was found to be of normal size but a soft tissue mass was palpated behind it. The adnexa were also of normal size. Laboratory controls revealed hematocrit: 36%, hemoglobin: 11.8%, WBC: 9100/ml (neutrophils: 70% and lymphocytes: 25%), urea: 31 mg% and glucose: 140 mg%. Urine test was normal and pregnancy test was negative. TVS revealed a solid mass, 9 cm in diameter, between the posterior wall of the uterus and the umbilicus. CT scan confirmed the diagnosis of a pelvic mass and showed the absence of the spleen in its normal position. The patient received an intravenous antibiotic scheme which included cephalosporine, metronidazole and an aminoglycoside. However, laboratory controls revealed hematocrit: 36%, hemoglobin: 11.9%, WBC: 14700/ml (neutrophils: 92% and lymphocytes: 7%). Laparotomy was performed and free hemorrhagic peritoneal fluid was found. The uterus and the adnexa were normal. However, an ectopic spleen two times larger than normal size was found in the space between the uterus and the rectum. Splenectomy was performed. Histology showed a spleen which weighed 395 g and was 15.5 x 9 x 6 cm in size. The structure was normal but it was characterized by increased hyperemia. Moreover, the fibroadipose tissue was characterized by inflamed lymph nodes.

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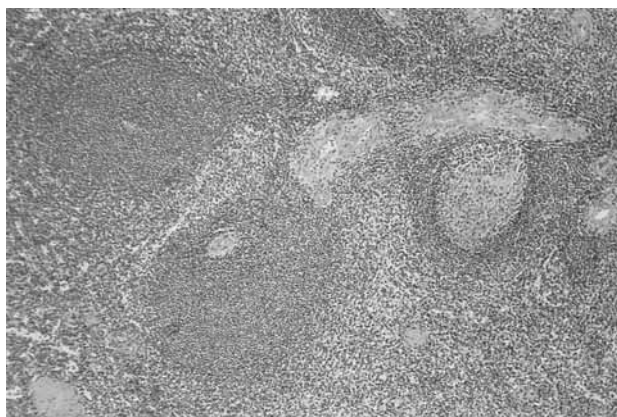


Figure 1. — Histological section of the pelvic mass showing the typical features of splenic tissue (hematoxylin-eosin x 25).

Discussion

Ectopic pelvic spleen is a very rare entity. Women between the ages of 20-40 years are more likely affected [3]. The common clinical presentation is an abdominal mass with pain [3]. However, in our two cases we were impressed by the different symptomatology. Hypogastric pain was the main symptom in the first case, whereas the second woman had more acute symptoms (acute abdomen) due to peritoneal inflammation.

The preoperative diagnosis is very difficult and is based first on a high index of suspicion and second on the TVS, CT or magnetic resonance imaging (MRI) scan findings [4]. Color Doppler imaging and power Doppler imaging could also be used to confirm the occurrence of torsion or infarction of the spleen. A scintigram with technetium-99-marked, heat-damaged red blood cells could also be helpful [1]. MRI angiography might also be useful [4]. The differential diagnosis of an irregular pelvic mass should include colonic diverticulosis, wandering kidney, coprolites, colon and mesentery tumors and ectopic spleen [5]. The diagnosis is made after abdominal laparotomy.

An ectopic located spleen may be complicated by an acute abdomen due to torsion of the splenic vascular pedicle, resulting in splenic infarction [4]. Although, splenopexy was used some years ago in the management of such pelvic masses [3, 6], the proposed treatment is splenectomy to avoid future torsion or rupture due to pressure, especially during pregnancy. If the diagnosis is made before severe complications occur, elective laparoscopic splenopexy could also be proposed [7]. However, Cobellis *et al.* proposed observation of a patient with a pelvic spleen diagnosed during pregnancy which came to term uneventfully [8]. Doppler monitoring was used till delivery to achieve possible early torsion diagnosis [8].

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