

Splenosis Mimicking an Adnexal Mass: Case Report and Review of the Literature

Adneksiyal Kitleyi Taklit Eden Splenozis: Olgu Sunumu ve Literatürün Gözden Geçirilmesi

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Geliş Tarihi/Received: 24.02.2009
Kabul Tarihi/Accepted: 08.06.2009

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ABSTRACT Splenosis is the heterotopic autotransplantation of splenic tissue usually following traumatic rupture of spleen. Although it is asymptomatic, sometimes it may present with pelvic pain or mass and mimic endometriosis or carcinoma, where it comes to the attention of the gynaecologist. A 26-year-old female patient was referred to our clinic with primary infertility and an adnexal mass. Her past medical history revealed an abdominal trauma at the age of 5 managed with laparotomy and splenectomy. A routine transvaginal ultrasound examination detected a solid, unilocular, 5 x 6 cm adnexal mass. No pelvic fluid was observed. Tumor markers were within normal range. Informed consent from the patient was obtained. Laparotomy was performed after diagnostic laparoscopy. The mass was carefully dissected from the adhesions and excised totally. Frozen section confirmed splenosis. Splenosis should always be considered by gynaecologists in the differential diagnosis of patients presenting an adnexal mass with a history of splenic trauma or spleen removal.

Key Words: Endometriosis; neoplasms, adnexal and skin appendage

ÖZET Splenozis genellikle dalağın travmatik rüptürü sonucu dalak dokusunun heterotopik ototransplantasyonudur. Asemptomatik olmasına rağmen bazen pelvik kitle ve ağrı ile bulunabilir ve kanser veya endometriyozisi taklit ederek jinekologların dikkatini çeker. Yirmi altı yaşındaki kadın hasta primer infertilite ve adneksiyal kitle ile kliniğimize refere edildi. Medikal öyküsünde beş yaşında laparotomi ve splenektomi ile sonuçlanan abdominal travma geçirdiği tespit edildi. Rutin transvajinal ultrasonografi incelemesinde 5 x 6 cm boyutlarında uniloküle solid kitle tespit edildi. Pelvik sıvı izlenmedi. Tümör belirteçleri normal sınırlar içinde idi. Hastadan bilgilendirilmiş onam alındı. Diagnostik laparoskopiden sonra laparotomi uygulandı. Kitle dikkatlice adezyonlardan disseke edilip total olarak çıkarıldı. Frozen sonucu splenozis ile uyumlu geldi. Dalak travması veya splenektomi öyküsü olan ve adneksiyal kitle ile gelen hastaların ayırıcı tanısında, jinekoloklar splenozisi daima göz önünde bulundurmalıdırlar.

Anahtar Kelimeler: Endometriyozis; splenozis; adneksiyal kitle

Türkiye Klinikleri J Gynecol Obst 2009;19(5):308-10

Splenosis is the autotransplantation of splenic tissue following surgery or traumatic splenectomy after traffic accidents. Splenic implants get their blood supply from surrounding tissue and grow into mature splenic tissue. The pathogenesis of splenosis is not well understood, and therefore it is not possible to predict when splenic implants will develop. The number of splenic implants does not correlate with the time since splenic rupture, the extent of damage to the spleen, or the amount of peritoneal blood during rupture.¹ It is believed that splenic tissue is capable of imp-

lanting on peritoneal surfaces, abdominal wall and omentum, where it can re-establish circulation and grow.² The autotransplanted splenic tissue of splenosis, similar to accessory spleens, is thought to perform normal splenic function.³ The incidence of splenosis is unknown since it is usually an incidental finding at surgery or autopsy. Only a minority of splenosis cases were reported in the gynecological literature.⁴ Its incidence in splenic rupture cases is as high as 65%-76%.^{5,6} Most implants are found in the left upper quadrant of the abdomen. Abdominal and pelvic splenosis often lead to the misdiagnosis of abdominal lymphoma, metastatic disease, carcinomatosis, primary renal or hepatic malignancy, adenomas, endometriosis or simple adenopathy.⁵ Since pelvic splenosis is a rare event, preoperative diagnosis is usually ovarian cyst, teratoma or endometrioma.² In differential diagnosis endometriosis, carcinoma, hemangiomas or metastatic disease should be considered.

We report a case presenting with primary infertility and pelvic mass, which was preoperatively mistaken for endometriosis.

CASE REPORT

A 26-year-old female patient was referred to our clinic with primary infertility and an adnexal mass. She has not received an infertility treatment. Her past medical history revealed an abdominal trauma at the age of 5 managed with laparotomy and splenectomy. Her pelvic examination revealed a 5 x 6 cm painless, immobile pelvic mass. A routine transvaginal ultrasound examination was detected a 5 x 6 cm solid, unilocular, hypoechogetic, adnexal mass which seemed to be left ovarian origin and an ovarian endometrioma was suspected. No pelvic fluid was observed. Tumor markers were within normal range. The patient agreed to undergo a diagnostic laparoscopy. Diagnostic laparoscopy was performed. A bluish-red mass scattered through the pelvis involving both visceral and parietal peritoneal surfaces, suggested ectopic splenic tissue. Solid, 5 x 6 cm a bluish-red mass was filling fossa ovarica (Figure 1). Bilateral ovary and uterus were detected normally. The patient was then subjected to an laparotomy. The mass was carefully dissected

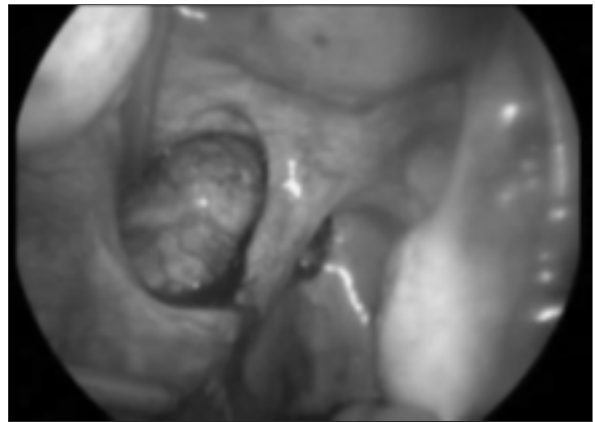


FIGURE 1: Laparoscopic view of splenosis.

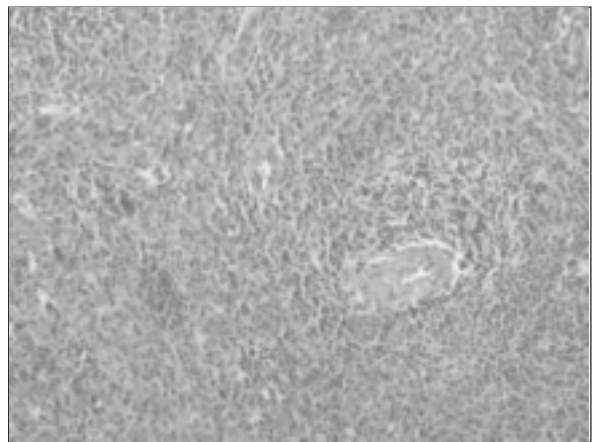


FIGURE 2: White and red pulp of the splenosis (HE, x100).

from the adhesions and excised totally. It was then sent for frozen section. Frozen section confirmed splenosis. Multiple implants were noticed on the peritoneal surface and biopsies were taken. Implants were not excised totally and the operation was completed. Histological diagnosis was splenic tissue with red and white pulp (Figure 2). The patient had an uneventful recovery and discharged on the third postoperative day.

DISCUSSION

The pathogenesis of splenosis is not well understood, and therefore it is not possible to predict when splenic implants will develop. The mechanism under autotransplantation is with splenic rupture, either from trauma or surgical removal. It is

presumed that disruption of the splenic capsule causes fragments of splenic tissue to be seeded into the adjacent cavities.⁷ The splenic nodules are reddish-blue, usually sessile, ranging in diameter from a pinpoint to about 6 cm, and are found in all intraperitoneal (serosal surfaces of small and large intestine, greater omentum, parietal peritoneum, mesentery) and some extraperitoneal sites.^{8,9}

In literature, pelvic splenosis was misdiagnosed as endometriosis, carcinoma, hemangiomas or metastatic disease.¹⁰ Both endometriosis and splenosis are characterized by diffuse peritoneal spread. An important differentiating factor between the two is the absence of intraperitoneal adhesions in cases of splenosis.

Although splenosis following surgery or trauma is well-documented in the literature, there are not too many reported cases where splenosis produced gynecological complications.¹⁰ Splenosis is usually asymptomatic. However, it may cause pelvic pain, or it may present as a pelvic mass.^{2,11,12} Our patient presented with the typical signs that were highly suggestive of an ovarian endometrioma. Because of the appearance of the pelvic mass on ultrasound scan and associated findings (CA-125), we initially considered the possible diagnosis of an en-

ometrioma. Complications by torsion, hemorrhage or infection have been reported.¹³

This clinical entity of splenosis should always be considered by gynaecologists in the differential diagnosis of patients presenting an adnexal mass with a history of splenic trauma or splenectomy. Once considered, the diagnostic workup for this mostly benign condition is simple, inexpensive, non-invasive, and may prevent future stress and procedures. A judicious use of the nuclear medicine department combined with a comprehensive history will diagnose a patient with splenosis without subjecting a patient to unnecessary invasive diagnostic techniques.¹⁴ The definite diagnosis as suggested by Bidet et al is with the re-infusion of technetium 99m-labeled heat-damaged autologous erythrocytes.¹⁵ The limitation of this modality is that the re-infusion of technetium 99m-labeled heat-damaged autologous erythrocytes may detect only nodules larger than 2 cm, which can be identified as functioning splenic tissue.

As a conclusion, splenosis should be kept in mind in patients with a history of posttraumatic splenectomy representing with pelvic mass by gynaecologists.

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