Endometriosis in the Rectus Abdominis Muscle: A Case Report

Rektus Abdominis Kası Yerleşimli Endometriozis: Olgu Sunumu

Rektus Kası Endometriozisi / Rectus Muscle Endometriosis

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Özet

Rektus abdominis kası yerleşimli endometriozis nadir görülen bir hastalıktır. Kliniğimizde rektus abdominis kası yerleşimli endometriozis tanısı ile cerrahi tedavi uyguladığımız olgunun klinik, radyolojik, histopatolojik özelliklerini değerlendirdik.

Anahtar Kelimeler

Ekstrapelvik Endometriozis; Rektus Abdominis Kası Yerleşimli Endometriozis; Skar Dokusunda Yerleşmiş Endometriozis

Abstract

Endometriosis involving the rectus abdominis muscle is a very rare disease. We present a case in whom endometriosis was found in the rectus abdominis muscle and discuss the imaging findings and histopathological correlation.

Keywords

Extrapelvic Endometriosis; Rectus Muscle Endometriosis; Scar Endometriosis

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Introduction

Endometriosis is a benign gynecological condition characterized by endometrial tissue outside the uterine cavity and can occur at intra- or extrapelvic localizations. Endometriosis involving out of the pelvis is account for 12% of all endometriosis [1]. Endometrial implants have been reported in many unusual sites outside the pelvis including the abdominal wall. The abdominal wall endometriosis usually results from implantation of endometrial cells during laparotomy. Surgical scar endometriosis has an incidence of 0,03% to 0,4% [2]. We present a rare case that endometriosis involving the rectus abdominis muscle.

Case Report

A 23-year-old woman was presented with persistent right lower abdominal pain and abdominal mass ongoing for 2 years, but worsening in the last 3 months. She reported that the size of the mass seemed to enlarge with her menses, and it become more painful. Her history included two cesarean sections 5 and 2 years before. On physical examination, a palpated solid and tender mass measuring 3x2 cm was found at her well-healed Pfannenstiel scar close to the right side. Routine hematologic and biochemical results were normal. Preoperative CA125 level was 45.0 U/ml. There was no previous history of endometriosis. Pelvic examination and pelvic ultrasonography were normal. High resolution ultrasound of the abdominal wall using 12 MHz linear transducer has revealed 21x21 mm heterogeneous hypoechogenic mass within the distal part of the right rectus abdominis muscle [Figure 1]. Based on the findings of lower

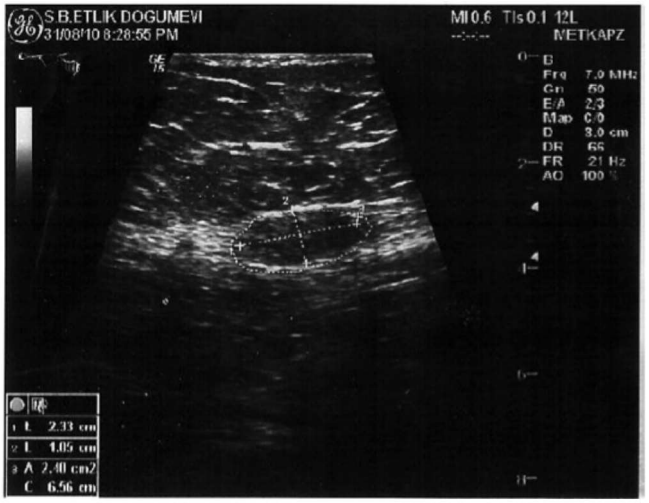


Figure 1. Ultrasound of soft tissues of the abdominal wall shows a heterogenous hypoechogenic mass.

abdomen physical examination and superficial ultrasonography, we decided to surgical intervention. At operation, the mass with a dimension of 3 x 3 cm located inside the rectus muscle that contained dark red coloured fluid was removed including the surrounding fibers of the rectus abdominis and covering fascia of the rectus sheath. Fascial defect of the abdominal wall was repaired by using polypropylene mesh. There were no findings of pelvic endometriosis on abdominal exploration. Histological sections revealed endometrial glands surrounded by stroma and embedded in fibrous connective tissue between the muscle fibers with clear surgical resection margins (Figure 2). CA125 level were normal range after the operation. The patient was



Figure 2. Histopathology showing endometrial glands and stroma (black arrow) in muscle tissue

discharged from hospital on the 2nd postoperative day uneventfully.

Discussion

The extrapelvic endometrial implants have been detected in various organs. Abdominal wall endometriosis, also known as scar endometrioma, is a rare site of localization, usually occurring after previous cesarean section or pelvic surgery. It is thought to result from mechanical transplantation of endometrial tissue into scars during abdominal surgery [3]. The other possible theories in the development of extrapelvic endometriosis are retrograde menstruation, venous or lymphatic metastasis and metaplasia [4]. In present case report, endometriosis was found within the body of the rectus abdominis muscle at the right corner of the surgical scar. It is an unusual and rare localization for endometriosis since it was first described in 1984 by Amato and Levitt [5].

The cesarean section is the operation most frequently associated with abdominal wall endometriosis with an incidence that is reported as 0.03% to up to 1% [6]. Similar cases faced after hysterotomy, hysterectomy, early amniocentesis, appendectomy or episiotomy have also been reported [7,8]. The reason of this situation may be explained as transportation of endometrial tissue to an ectopic site firstly and then ectopic cells may induce metaplasia of the surrounding cells into the endometrial tissue [1]. It is also known that during pregnancy high level of serum progesterone impact negatively on endometriotic tissue growth and the implanted endometrium should be less prone to implant and proliferate at the ectopic site. A 20% of abdominal wall endometriosis is not associated with a previous surgery [9]. In this case possible mechanism can be explained as venous or lymphatic metastasis of endometrial cells [9].

The classical symptoms of abdominal wall endometriosis are cyclic pain associated with a palpable mass adjacent to a surgical scar. However, approximately 30% of the patients complain about constant pain in the scar area or some cases may present as an asymptomatic mass in the region of a surgical scar [10]. The mean period between the surgery and symptoms is about 18 months, but up to ten years after surgery [10] which was 2

years in our case.

Ultrasonography may be helpful in defining the cystic or solid nature of the mass and even exclude other intra-abdominal pathologies such as hernia. Suture granuloma, abscess, neuroma, desmoids tumor, hematoma, lymphadenopathy, subcutaneous cyst and metastatic cancer should be considered for differential diagnosis. Excision and histopathological evaluation of the mass is required for definitive diagnosis. Computed tomography guided needle aspiration may be used for selected cases, but it has been associated to an increased risk of recurrence [11].

The treatment of choice for rectus abdominis endometriosis is a wide local excision of the lesion with surgically negative margins. The use of synthetic mesh may be necessary for adequate closure of the abdominal wall. Recurrence of endometriosis in this area has rarely been reported but inadequate excision can lead to recurrence. GnRH agonists may also provide a temporary reduction in size of the endometriotic lesion, but it has been recommended only in cases with coexisting pelvic endometriosis [12].

In conclusion, endometriosis of the rectus abdominis muscle should be considered in the differential diagnosis in cases with painful abdominal wall mass with and without a surgical history.

Competing interests

The authors declare that they have no competing interests.

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