Case Reports

Spontaneous umbilical endometriosis: a case report with one-year follow-up

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Summary

Umbilical endometriosis is a very rare disease. We report a case of spontaneous umbilical endometriosis in a 36-year old female. Endometriosis was suspected because of the presence of the typical cyclic bleeding and swelling. Abdominal CT excluded the presence of other endometriotic localizations. The umbilical mass was widely excised together with the umbilicus, fascia and peritoneum. The ensuing defect was primarily closed without using prosthetic mesh. Postoperative recovery was uneventful. Histological examination of the specimen showed the presence of endometrial glands with a stromal component, compatible with the diagnosis of endometriosis. At one-year follow-up the results of surgery were satisfactory with no sign of endometriosis recurrence and or parietal defect occurrence. We suggest that surgical excision should be wide in order to prevent local recurrence, and prosthetic materials should not be used to repair the ensuing umbilical defect.

Key words: Endometriosis; Extragenital endometriosis; Umbilicus.

Introduction

Endometriosis is the abnormal growth of endometrial tissue outside the uterine cavity. It has been estimated that endometriosis affects 15% of women of reproductive age and up to 50% of infertile women [1]. It may be pelvic or extrapelvic. Extrapelvic endometriosis may occur in up to 12% of women with endometriosis [2]. Cutaneous endometriosis has also been described and generally occurs in a surgical scar from abdominal or pelvic procedures, including cesarean sections, hysterectomy, episiotomy, and laparoscopy [3].

We report a case of cutaneous endometriosis of the umbilical region in a young woman whose past medical history was unremarkable.

Case Report

A 36-year-old woman presented with a nine-month history of a reddish cutaneous nodule, located in the umbilical region. The lesion showed cyclic changes: increase in size and consistency with associated pain during the first two days of menses and secretion of a clear liquid on the 14th and 15th day of the menstrual cycle. Past medical history was unremarkable. Obstetric history showed two full-term spontaneous vaginal deliveries, two spontaneous abortions and two therapeutic abortions. On physical examination the umbilical mass was hard and irreducible and measured 1 cm in diameter. Pelvic examination and transvaginal ultrasonography (US) were normal, as well as thoracic and abdominal computed tomography (CT).

The umbilical mass was widely excised together with the umbilicus, fascia and peritoneum (Figure 1). The ensuing defect was primarily closed without using prosthetic mesh.

Postoperative recovery was uneventful. Histological examination of the specimen showed the presence of endometrial glands with a stromal component, compatible with the diagnosis of endometriosis (Figure 2).

At one-year follow-up the results of surgery were satisfactory with no sign of endometriosis recurrence and or parietal defect occurrence.

Discussion

Umbilical endometriosis is rare with an estimated incidence of 0.5% to 1.0% of all patients with endometrial ectopia [4]. It may be associated with abdominal surgical scars or occur spontaneously. Several theories exist for the development of umbilical endometriosis. Postsurgical cutaneous endometriosis may be due to transplantation of viable endometrial cells into scars at the time of surgery, especially if the surgical procedure includes possible contact with endometrial tissue (i.e., episiotomy, hysteretomy, caesarean section, and ectopic pregnancy) [5]. Spontaneous umbilical endometriosis is supposed to arise from transport of endometrial cells from the pelvis via lymphatic and vascular channels, or develop through metaplasia of urachus remnants [5].

Diagnosis of umbilical endometriosis is sometimes difficult. An umbilical mass associated with cyclic pain, bleeding and discharge may suggest the correct diagnosis. Differential diagnoses include hernias, neoplasms, abscesses, various granulomas and embryological rests. US is useful in determining whether a mass is cystic or solid, but the appearance of endometrioma on US is non-

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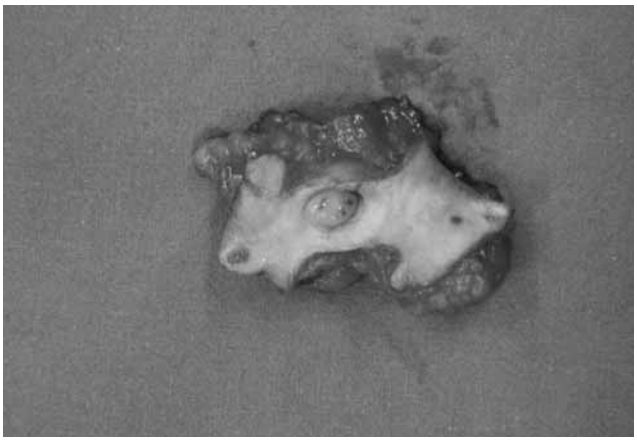

Figure 1. — The excised specimen showing the endometriotic mass.

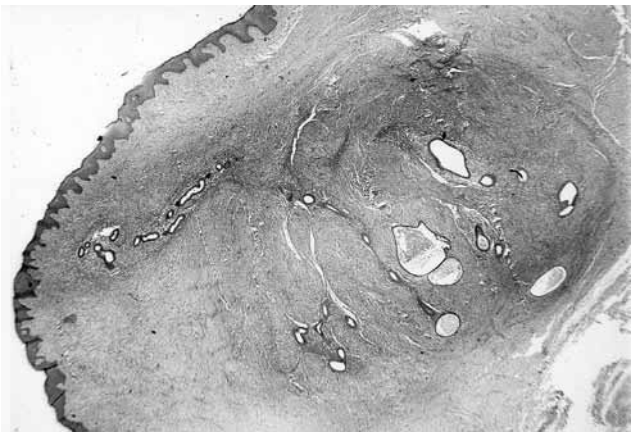

Figure 2. — Cutaneous dermal foci of endometriosis with endometrial stroma and glands (25 x magnification/hematoxylin-eosin stain).

specific [6]. CT or NMR may help in finding the correct diagnosis and are useful for excluding intraabdominal extension of a lesion [7]. A recent study has suggested a distinctive dermatoscopic feature of cutaneous endometriosis, comprising small red globular structures [8].

Surgery is the treatment of choice. Extensive surgical excision, including the adjacent fascia and peritoneum is recommended to avoid local recurrence [9]. Surgeons should be aware that rare cases of endometrial carcinoma arising from endometriosis have been reported [10]. Because of the risk either of recurrence or neoplastic transformation of endometriosis, we chose the primary repair of the umbilical defect without using prosthetic materials. Moreover, there is no evidence in the literature that prosthetic materials can be safely used in patients with umbilical endometriosis [11].

Histopathological features of umbilical endometriosis are similar to those found within the uterine endometrium at each of the main phases of the menstrual cycle [12]. These findings allow a correct diagnosis to be defined in most cases. Immunohistochemical examination can help in differentiating the endometrial tissue in dubious cases [13].

In conclusion, umbilical spontaneous endometriosis is rare and should be suspected when a mass with cyclic pain, bleeding and discharge is present. Imaging techniques do not usually allow a correct diagnosis to be made with the exception of dermatoscopy. Surgical treatment involving wide local excision with clear margins is the treatment of choice. Use of prosthetic materials is not recommended because of the risk of recurrence and neoplastic transformation.

References

[1] Purvis R.S., Tyring S.K.: "Cutaneous and subcutaneous endometriosis. Surgical and hormonal therapy". *J. Dermatol. Surg. Oncol*., 1994, *20,* 693.

[2] Franklin R.R., Navarro C.: "Extragenital endometriosis". In: Chadha D.R., Buttran V.C. (eds.). Current Concepts in Endometriosis. New York, Alan R. Liss, Inc. 1990, 289.

[3] Albrecht L.E., Tron V., Rivers J.K.: "Cutaneous endometriosis". *Int. J. Dermatol.,* 1995*, 34,* 261.

[4] Michowitz M., Baratz M., Stavorovsky M.: "Endometriosis of the umbilicus". *Dermatologica,* 1983, *167*, 326.

[5] Gunes M., Kayikcioglu F., Ozturkoglu E., Haberal A.: "Incisional endometriosis after caesarian section, episiotomy and other gynaecological procedures". *J. Obstet. Gynaecol. Res*., 2005, *31*, 471.

[6] Vincent L.M., Mittelstradet C.A.: "Sonographic demonstration of endometrioma arising in a cesarean section scar". *J. Ultrasound Med*., 1985, *4,* 437.

[7] Yu C.Y., Perez-Reyes M., Brown J.J., Borrello J.A.: "MR appearance of umbilical endometriosis". *J. Comput. Assist. Tomogr.,* 1994, *18*, 269.

[8] Di Giorgi V., Massi D., Mannone F., Stante M., Carli P.: "Cutaneous endometriosis: non-invasive analysis by epiluminescence microscopic". *Clin. Exp. Dermatol.,* 2003, *28,* 315.

[9] Douglas C., Rotimi O.: "Extragenital endometriosis: a clinicopathological review of a Glasgow hospital experience with case illustrations". J. Obstet. Gynaecol., 2004, *24*, 804.

[10] Lauslahti K.: "Malignant external endometriosis. A case of adenocarcinoma of umbilical endometriosis". *Acta Pathol. Microbiol. Scand*., 1972*, 233*, 98.

[11] Kokuba E.M., Sabino N.M., Sato H., Aihara A.Y., Schor E., Ferreira L.M.: "Reconstruction technique for umbilical endometriosis". *Int. J. Gynaecol. Obstet*., 2006, *94,* 37.

[12] Tidman M.J., MacDonald D.M.: "Cutaneous endometriosis: a histopathologic study". *J. Am. Acad. Dermatol*., 1988, *18,* 373.

[13] Kerr O.A., Mowbray M., Tidman M.J.: "An umbilical nodule due to endometriosis". *Acta Derm. Venereol.,* 2006, *86*, 277.

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