

## Isolated inguinal endometriosis. Case report with ultrasonographic preoperative diagnosis

P.G. CALÒ, F. ESU, A. TATTI, L. PILLONI<sup>1</sup>, F. MEDAS, G. PISANO, A. NICOLOSI

**SUMMARY:** Isolated inguinal endometriosis. Case report with ultrasonographic preoperative diagnosis.

P.G. CALÒ, F. ESU, A. TATTI, L. PILLONI, F. MEDAS, G. PISANO, A. NICOLOSI

*Inguinal endometriosis is rare and accounts for 0.3-0.6% of patients affected by endometriosis. A correct preoperative diagnosis is rare. Diagnosis is frequently made by histologic examination.*

*A 36-year-old nulliparous woman presented with a painful mass in her right groin of 2 years duration. The pain fluctuated according to the menstrual period. Physical examination revealed an elastic hard mobile mass measuring 2x2 cm in the right inguinal region. Ultrasound examination confirmed a hypoechoic tumor in the right inguinal region with poorly defined boundaries and perilesional and intralesional vascular flow suspect for endometriosis.*

*Wide excision of the lump with a part of the round ligament was carried out. Histology showed endometrial glands and stroma within the fibrous tissue.*

*The patient had an uneventful recovery and was discharged the next day. After surgery, the pain disappeared completely. No signs of recurrence occurred at approximately 16 months after the surgery.*

*Although rare, extrapelvic endometriosis should be considered in the differential diagnosis in women of reproductive age presenting with an inguinal mass, especially if the groin mass is associated in size and tenderness with menstrual variability. US appearance is very useful in diagnosis so ultrasonography can be considered the examination of choice.*

**RIASSUNTO:** Endometriosi inguinale isolata. Descrizione di un caso clinico con diagnosi preoperatoria ecografica.

P.G. CALÒ, F. ESU, A. TATTI, L. PILLONI, F. MEDAS, G. PISANO, A. NICOLOSI

*L'endometriosi inguinale è rara e rappresenta lo 0.3-0.6% delle forme di endometriosi. Una diagnosi preoperatoria corretta è rara e la diagnosi emerge frequentemente dall'esame istologico.*

*Una donna nullipara di 36 anni si presentò all'osservazione con una massa dolente in regione inguinale destra presente da 2 anni. Il dolore si modificava di intensità in relazione al ciclo mestruale. L'esame obiettivo mise in evidenza una tumefazione duro-elastica, mobile, in regione inguinale destra, delle dimensioni di 2 x 2 cm. L'esame ecografico evidenziò una tumefazione ipoecogena in regione inguinale destra a limiti scarsamente definiti e vascolarizzazione peri e intralesionale, sospetta per endometriosi.*

*Fu praticata una ampia asportazione della massa insieme a una parte del legamento rotondo. L'istologia confermò la presenza di tessuto endometriale misto a tessuto fibroso. La paziente ebbe un decorso postoperatorio regolare e fu dimessa il giorno successivo all'intervento. Dopo l'intervento il dolore scomparve completamente. Non vi sono segni di recidiva 16 mesi circa dopo il trattamento chirurgico.*

*Sebbene rara, l'endometriosi extrapelvica deve essere considerata nella diagnosi differenziale nelle donne in età riproduttiva con una tumefazione inguinale, specialmente se varia nelle dimensioni e nella consistenza durante il ciclo mestruale. L'aspetto ecografico è molto utile nella diagnosi e di fatto rende l'ecografia l'indagine di scelta.*

**KEY WORDS:** Endometriosis - Groin - Round ligament - Diagnosis.  
Endometriosi - Regione inguinale - Legamento rotondo - Diagnosi.

### Introduction

Endometriosis is a common gynaecologic disorder, affecting 2% of the population and 10% of women in fourth decade (1, 2). It is characterized by the presence and proliferation of endometrial tissue in ectopic sites (2, 3). It may affect any of the abdominal or pelvic organs, but groin involvement is rare (1).

The first case of inguinal endometriosis was described by Cullen in 1896 (1, 4). Since then 40 cases have

University of Cagliari, Italy  
"Monserrato" Hospital  
Department of Surgery and Odontostomatological Sciences  
<sup>1</sup>"San Giovanni di Dio" Hospital  
Unit of Pathology

© Copyright 2011, CIC Edizioni Internazionali, Roma

been reported in the literature (4, 5). A correct preoperative diagnosis is rare. Diagnosis is frequently made by histologic examination (2, 6).

We report a case of a patient in which inguinal endometriosis was suspected by clinical presentation and ultrasound.

## Case report

A 36-year-old nulliparous woman presented with a painful mass in her right groin lasting 2 years. She denied dysmenorrhea. Her past medical history was unremarkable. The pain fluctuated according to the menstrual period.

Physical examination revealed an elastic hard mobile 2x2 cm mass in the right inguinal region. The swelling was not reducible and had no evident cough impulse. Skin over the mass was normal.

Ultrasound examination revealed a complex hypoechoic mass in the right inguinal region with poorly defined boundaries and perilesional and intralesional vascular flow suspect for endometriosis (Fig. 1).

At surgery a 5 cm longitudinal skin incision was made over the mass. The mass was attached to the extraperitoneal portion of the right round ligament. Wide excision of the lump with a part of the round ligament was carried out. No hernial sac was detected. Posterior abdominal wall and transversalis fascia appeared solid. Histology showed endometrial glands and stroma within the fibrous tissue (Fig. 2). No malignant cells were identified.

The patient had an uneventful recovery and was discharged the next day. After surgery, the pain disappeared completely. A diagnostic pelvic laparoscopy showed no intraperitoneal or pelvic endometriosis. Patient was submitted to hormonal therapy.

No signs of recurrence occurred at 16 months after the surgery.

## Discussion

Endometriosis is a common gynaecological condition, occurring in 8-15% of fertile women (1, 4, 5, 7, 8). Inguinal endometriosis is rare and accounts for 0.3-0.6% of patients affected by endometriosis (1, 8). The right side is much more commonly involved than the left (90-94%), while bilateral involvement is exceptional (only one case described) (1, 4, 8, 9, 10). The right-sided preponderance may be explained by the theory that the sigmoid colon relatively protects the left groin (1, 4, 5, 10). In our case, the patient also presented with the more common right-sided inguinal endometriosis.

The most common complaint of patients with inguinal endometriosis is an inguinal mass, followed by pain and enlargement of the mass near menses (4). In 30-37% of patients, inguinal endometriosis is associated with a groin hernia (6, 8). Pelvic endometriosis is found in most patients with inguinal endometriosis (4). Though rare, malignant degeneration is possible (8). Our patient did not have any intraperitoneal or pelvic endometriosis, nor a groin hernia.

The imaging appearance, particularly on CT, is non-specific (4). Magnetic resonance imaging has been de-

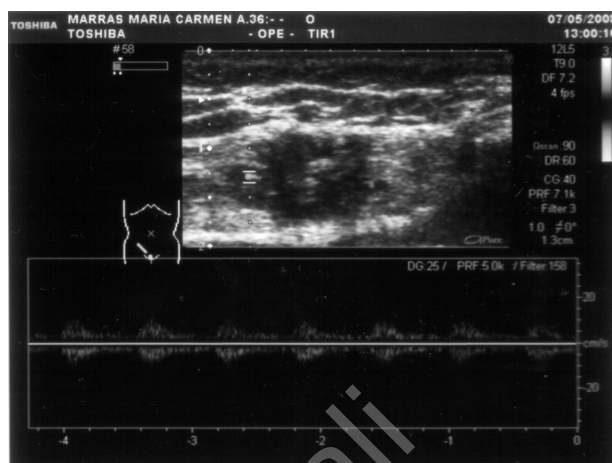


Fig. 1 - Ultrasonographic finding: complex hypoechoic mass with poorly defined boundaries.

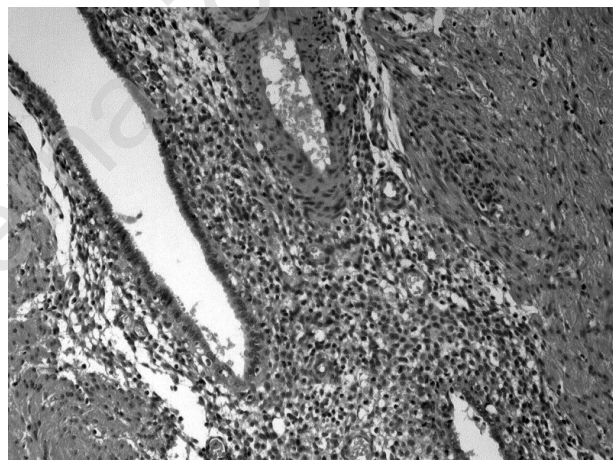


Fig. 2 - Histological finding: endometrial glands and stroma within the fibrous tissue.

monstrated as particularly useful in diagnosing extra-peritoneal localizations. To evaluate the mass sonography is also a very handy and a beneficial tool (1). In many prior cases, patients had undergone surgery after a preoperative diagnosis of inguinal hernia (4). In our case, ultrasonography detected an irregular solid hypoechoic nodule in the groin region with perilesional and intralesional vascular flow. This picture contributed to confirm the suspicion of endometriosis. We did not use magnetic resonance or computed tomography in our case. In our opinion CT and MR should be limited to the few cases in which other diseases (especially malignant) are to be excluded. Cytology also can aid in distinguish endometriosis from inflammatory, neoplastic, or lymphoproliferative processes (4). We have no experience in using cytology in such cases.

Surgical excision of inguinal endometriosis is repor-

ted to be curative (11). Hormonal therapy has also been recommended (5). In our case surgery was curative too and patient is currently disease free.

## Conclusion

We present an unusual case of inguinal endometriosis involving the extraperitoneal portion of the round li-

gament. The appearance on US supported the clinical diagnosis of endometriosis.

Although rare, extrapelvic endometriosis should be considered in the differential diagnosis in women of reproductive age presenting with an inguinal mass, especially if the groin mass is associated in size and tenderness with menstrual variability. US appearance is very useful in diagnosis, so ultrasonography can be considered the examination of choice.

## References

1. Hagiwara Y, Hatori M, Moriya T, Terada Y, Yaegashi N, Ehara S, Kokubun S. Inguinal endometriosis attaching to the round ligament. *Australas Radiol* 2007; 51: 91-4.
2. Miranda L, Settembre A, Capasso P, Piccolboni D, De Rosa N, Corcione F. Inguinal endometriosis or irreducible hernia? A difficult preoperative diagnosis. *Hernia* 2001; 5: 47-9.
3. La Gamma A, Kunin N, Letoquart JP, Mambrini A. Endométriose du ligament rond de l'utérus dans le canal inguinal: A propos d'une nouvelle observation. *J Chir* 1994; 131: 162.
4. Freed KS, Granke DS, Tyre LL, Williams VL, Omert LA. Endometriosis of the Extraperitoneal Portion of the Round Ligament: US and CT Findings. *J Clin Ultrasound* 1996; 24: 540-2.
5. Mashfiqul MAS, Tan YM, Chintana CW. Endometriosis of the inguinal canal mimicking a hernia. *Singapore Med J* 2007; 48: 157-9.
6. Baccoli A, Mais V, Pani C, Musu S, Milesi M, Farina GP. Endometriosis del canale inguinale. Contributo clinico. *Giorn It Ost Gin* 1999; 12: 579-82.
7. Calò PG, Piludu M, Catani G, Piga G, Mallocci A, Nicolosi A. Endometriosis ombelical. Descrizione di un caso clinico. *Chir Ital* 2005; 57: 535-7.
8. Licheri S, Pisano G, Erdas E, Ledda S, Casu B, Cherchi MV, Pomata M, Daniele GM. Endometriosis of the round ligament: description of a clinical case and review of the literature. *Hernia* 2005; 9: 294-7.
9. Candiani GB, Vercellini P, Fedele L, Vendola N, Carinelli S, Scaglione V. Inguinal Endometriosis: Pathogenetic and Clinical Implications. *Obstet Gynecol* 1991; 78: 191-4.
10. Mascaretti G, Patacchiola F, Di Berardino C, Moscarini M. Endometriosis inguinale isolata. Descrizione di un caso clinico. *Minerva Ginecol* 2000; 52: 249-52.
11. Kapan M, Kapan S, Durgun AV, Goksoy E. Inguinal endometriosis. *Arch Gynecol Obstet* 2005; 271: 76-8.