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CASE REPORT

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Inguinal endometriosis

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Abstract *Introduction:* Extrapelvic endometriosis is a rarely seen condition and it is occasionally presented to the general surgeons. It is often diagnosed incidentally. *Case report:* In this report we presented three cases of inguinal endometriosis all of which were thought to be inguinal hernia preoperatively. They were diagnosed during the operation for inguinal hernia repair and treated with simple excision of the lesions with a part of the round ligament.

Keywords Extrapelvic endometriosis · Inguinal canal

Introduction

Endometriosis is a disease causing chronic pelvic pain, dysmenorrhea and infertility. It is rarely seen by general surgeons and often diagnosed incidentally [8]. Although extrapelvic endometriosis is infrequent it has been described at multiple sites including gastrointestinal tract, urinary tract, thoracic cavity including lung and pleura and other sites such as skin, central nervous system, umbilicus, abdominal wall incisions, episiotomy scars, bone and inguinal canal [2, 4]. Interestingly spleen and heart are the organs which have not been a site of reported endometriosis [3]. In this report we presented three cases of this rare condition diagnosed incidentally during operation for inguinal hernia repair.

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Case report

Case 1

A 39-year-old woman was referred with a 5-year history of a right-sided lump and pain in her groin increasing in size particularly during menstruation. These complaints were decreased during a 2-month pregnancy resulting in abortus 2 years ago. On admission general and gynecological examinations were normal except for a 3×3-cm right groin swelling just above the inguinal line on the reflection of external inguinal ring. Lump was firm in consistency, and was not mobile. Pelvic ultrasonography revealed an echolucent mass of 16 mm in diameter in right ovary and two echolucent masses of 20 and 27 mm in diameter in the left ovary. On the right inguinal region, a lobulated solid mass of 13 mm length with heterogeneous echogenic appearance was seen. She was taken to the operation after the required preparations. After a right inguinal oblique incision, inguinal canal was opened and a hemorrhagic mass of 3×4 cm infiltrating the posterior wall of the inguinal canal inclining towards pubic tubercle was found. Mass was excised with a part of the round ligament from the internal ring of the inguinal canal (Fig. 1). The defect of the posterior wall of the inguinal canal was repaired by plication with prolene sutures. Histological examination revealed endometrial glands surrounded by endometrial stromal cells in a fibrous wall. Hemosiderin deposition within the macrophages was also present (Fig. 2). The patient had an uneventful recovery and no signs of recurrence occurred since then.

Case 2

A 42-year-old postmenopausal woman was referred with a 4-year history of a right-sided lump in her groin. The lump had gradually increased in size over years. The physical examination revealed a 2×3-cm mass over the right inguinal ligament mimicking irreducible right inguinal hernia. The patient was taken to the operation. On



Fig. 1 Macroscopic appearance of the resected mass

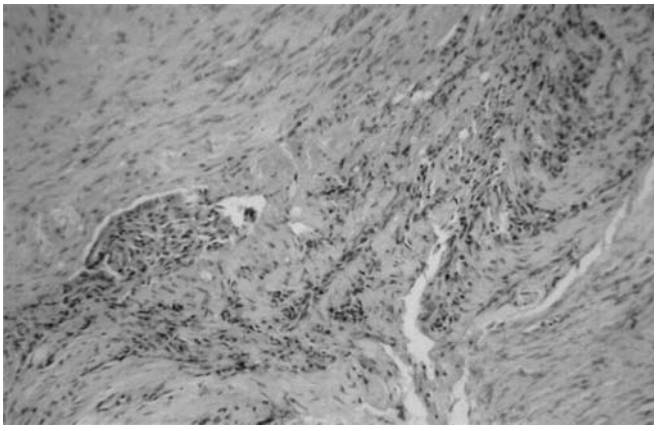


Fig. 2 Histological appearance of endometrial glands surrounded by endometrial stromal cells in a fibrous wall (HE, ×200)

exploration a cystic mass fixed to the round ligament was found in a small hernia sac in the internal ring. Round ligament was excised with the cystic mass and high ligation with plication of transversalis fascia was performed to repair hernia. Histological examination revealed foci of endometriosis, findings of old bleeding, fibrosis and hyperemia.

Case 3

A 51-year-old postmenopausal woman was referred with a 7-year history of a left-sided painless lump in her groin. The physical examination revealed a 5×4-cm mass over the left inguinal ligament. The patient was taken to the operation. On exploration a cystic mass fixed to the round ligament was found. Round ligament was excised with the cystic mass and transfixed with prolene sutures. Histological examination revealed foci of endometriosis and fibrosis.

Discussion

Classically endometriosis is defined as the presence of endometrial glands and stroma outside the uterine cavity and musculature having two variants: endometriosis interna and endometriosis externa. Endometriosis interna, which is now referred as adenomyosis, is described as growth of benign endometrial tissue into the myometrium whereas endometriosis externa refers to the presence of endometrial tissue implants in all other sites as remote as brain. Currently it is classified as pelvic and extrapelvic endometriosis. Extrapelvic endometriosis is a rare disease entity which can be seen in every organ system ranging from central nervous system to skin. According to the Markham and his colleagues' [5] classification extrapelvic endometriosis is divided into four classes:

1. Gastrointestinal tract
2. Urinary tract
3. Thoracic cavity including lung and pleura
4. Other sites including skin and nervous system

Umbilicus, abdominal wall incisions, episiotomy scars, biceps muscle, bone, peripheral nerves and inguinal canal are the rarer reported sites in the literature [2, 9]. The gastrointestinal tract is the most common site of extrapelvic endometriosis whereas it has never been reported to occur in the spleen or heart [2, 3].

The pathogenesis of endometriosis is thought to be secondary to retrograde menstruation, vascular or lymphatic spread, or coelemic metaplasia [3]. Although it is thought to be a disease of particularly premenopausal women, there have been a few case reports of endometriosis occurring in the urinary systems of men who are being treated for prostate cancer with high doses of estrogens [2, 3].

Swellings over Pfannenstiel scar or inguinal canal, umbilical nodules, rectal bleeding, recurrent abdominal pain are the symptoms referring these patients to the general surgeons. Abdominal pain or localized pain has a catamenial characteristic [1, 4]. In two of our cases probably due to the patients being postmenopausal there was neither pain nor catamenial symptoms. In most of the cases with a preoperative diagnosis of incarcerated hernia, the affected structure is almost always the extraperitoneal portion of the round ligament [1]. Also there are cases reporting the endometriotic tissue lying within the inguinal lymph nodes. In our cases the ectopic endometriotic tissue was in the external portion of the round ligament. The treatment is primarily surgical excision of the entire lesion in order to prevent recurrence, but since pelvic or intraperitoneal endometriosis may also be present, concurrent diagnostic laparoscopy or referral to gynecologist postoperatively should be done [6, 7]. We referred three of our patients to a gynecologist postoperatively; further studies revealed no other foci of endometriosis and three of the patients have been living disease-free since then.

Although rare, extrapelvic endometriosis should always be borne in mind in differential diagnosis when women of perimenopausal age have swellings over incisional scars,

inguinal canal or umbilicus presenting with cyclic pain. Prompt diagnosis and entire resection of the lesion with gynecological referral is adequate both in treatment and in prevention of extrapelvic endometriosis.

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