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Inguinal Endometriosis: a Report of Two Cases and a Review of the Literature

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The inguinal region is an uncommon site for endometriosis (1,2). Endometriosis in the groin is usually located in the extraperitoneal portion of the round ligament, but has been described in other anatomical structures in this region such as in inguinal hernial sacs, lymph nodes, the canal of Nuck, and in relation to femoral vessels and femoral hernia (3). However, this report does not include these sites. The incidence of endometriosis in the extraperitoneal part of the round ligament was found to be 0.3-0.6% among women suffering from endometriosis in general (1-6). The first case was reported in 1896. A history of pain between menstruation periods and tenderness together with a lump is important in differentiating this condition from another inguinal pathology (1).

We report two cases of endometriosis in the extraperitoneal part of the right round ligament and review the literature published in English.

Case 1

A 30-year-old GOP0 woman complained of a lump in the right groin present for about 1.5 years. The tumor had gradually enlarged. She described exacerbations of pain and tenderness in the lump during menstruation, and also remembered light pains in the groin between her menstruation periods regularly occurring every 28th day and lasting 4-5 days.

There was no history of groin operations. The preoperative diagnosis was endometriosis. On physical examination, there was a severe tender immobile mass in

her right groin just outside the superficial inguinal ring. Vaginal examination was normal.

A surgical operation and at the same time laparoscopy were carried out. During the operation, chocolate cysts or hernias were not found. Histological examination of the mass, which measured 4x3x1.5 cm, showed endometrial tissue scattered between fibrocollagen tissue. In this case, we detected endometriosis of the outside portion of the round ligament, but not pelvic endometriosis. The histologic diagnosis was endometriosis of the round ligament. There was no evidence of recurrence of the lump for 13 months after the operation.

Case 2

A 29-year-old GOP1 woman complained of a lump in the right groin present for about 3 years. The mass had gradually enlarged and became slightly tender for a few days during menstruation. Her menstruation periods are regular, and occur on the 28th day and last 3-4 days. The patient had no history of right groin operations.

Physical examination showed a mass, measuring 3x2.5 cm and moderately tender on palpation. The mass was located in the right groin just outside the superficial inguinal ring. The patient had preoperative radiologic studies and ultrasound, which did not specifically aid in the diagnosis. The preoperative diagnosis was lymphadenitis. Gynecological examination was normal. An operation and at the same time laparoscopy were performed. Chocolate cysts or hernias were not encountered during the operation.

Macroscopically, the mass measured 4x3x2.5 cm, and had a brownish-gray irregular surface. Microscopic examination showed endometrial tissue, consisting of endometrial glands and stromal cells. These components were scattered between fibrocollagen tissue (Figure 1). Histological diagnosis was endometriosis of right round ligament. There were no complications or recurrence during the 17-month follow-up.

Endometriosis has been described in most parts of the body, but it is uncommon in the round ligament. It was reported to occur in 6 out of 958 (0.6 %) women with endometriosis (2).

The origin of endometriosis is unknown, but there are several theories to explain the pathogenesis of endometriosis: vascular spread, tubal regurgitation, metaplasia of mesothelial cells, and direct extension along the round ligament from a neighboring process in the pelvis (3,7-10).

Preoperative misdiagnoses have often been made due to the rarity and site of endometriosis in the extraperitoneal portion of the round ligament. Common clinical misdiagnoses include lymphadenitis like in one of our two cases, and hernia. A history of the typical pain is essential in order to exclude another pathology (11).

The symptoms are a mass in the groin, premenstrual tenderness and pain. The symptoms typically subside between the menstruations (1,3).

The characteristics of all reported cases (1-9,12-25) in the literature published in English are listed in the Table 1.

It is clear that the majority of the cases listed in the table, are located in the right groin. Only three patients had left-sided disease and one patient had bilateral inguinal endometriosis (2,8,12,22). Our two cases were also located in the right groin. Because lymphatic drainage is not a satisfactory reason (2), it is not known why the lesions occur predominantly in the right inguinal region (3,6).

In some cases listed in the table, the condition is often associated with an inguinal hernia (25%). Only ten patients had pelvic endometriosis (2,3,26), six of which were in Candiani's study (2). This may explain the reported subfertility of women with endometriosis of the round ligament (3). Mean age for all 40 cases was 37.45 years. The parity in this study was 0.76 among those 30 women whose parity is listed in the Table. It can be inferred from the table that the women suffering from endometriosis were relatively infertile.

It has been reported that surgical excision is sufficient for treatment of inguinal endometriosis (1,2,11). If this disease is detected during an inguinal operation, a laparoscopy is recommended during the same operation (2,3).

In conclusion, inguinal endometriosis is usually located in the right inguinal region. These patients were relatively infertile. Surgical excision is sufficient for treatment of inguinal endometriosis.

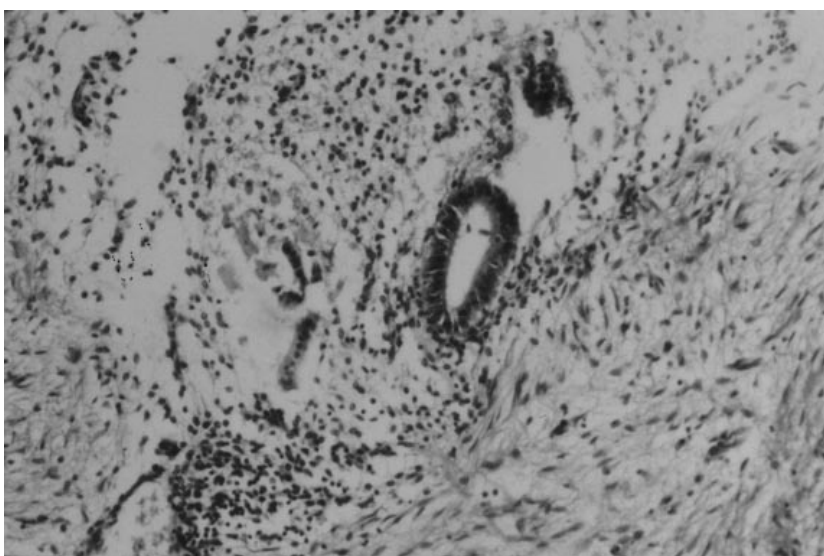


Figure 1. Endometrial glands associated with stromal cells among fibrocollagen tissue (Hematoxylin and eosin; x100).

Table 1. Characteristics of 40 cases of endometriosis in the extraperitoneal part of the round ligament.

	Author	Age	Age at onset of symptoms	Side	Parity	Abortions	Associated hernia
1	Sampsons (12)	47	44	Left	?	?	0
2		41	37	Right	?	?	0
3	Beck (8)	38	33	Left	2	1	0
4	Daro et al. (4)	40	37	Right	2	0	0
5	Jimenez et al. (5)	49	49	Right	2	0	0
6		34	?	Right	?	?	0
7		49	41	Right	4	1	0
8		36	35	Right	0	?	Inguinal
9	Strasser et al. (6)	40	26	Right	1	0	0
10		39	?	Right	0	?	Inguinal
11	Zeifer (13)	42	40	Right	0	?	Inguinal
12	Cullen (14)	37	29	Right	1	0	0
13	Niswander (15)	34	29	Right	?	?	Inguinal
14		36	28	Right	0	0	0
15	Blumer (9)	47	24	Right	1	?	0
16	Dormandy (16)	38	23	Right	1	1+1 tubal	Inguinal
17		49	49	Right	0	0	Inguinal
18		40	36	Right	0	0	Inguinal
19	Sanders (17)	41	29	?	Multi	?	Inguinal
20	Pellegrini et al (18)	36	31	Right	0	?	0
21		30	27	Right	0	?	0
22	Astore (7)	38	?	Right	?	?	0
23	Rubenstein et al. (19)	40	37	Right	1	1	0
24	Labry et al. (20)	35	34	Right	?	?	0
25	Lyall (21)	38	34	Right	0	0	0
26		46	38	Right	1	0	0
27	Demetriades et al. (22)	36	35	Left	2	?	Inguinal
28	Cullen (23)	43	?	Right	?	?	Inguinal
29	Damgaard et al. (24)	47	42	Right	?	?	0
30	Dickinson (25)	34	29	Right	0	0	0
31	Clausen (3)	29	24	Right	0	0	0
32	Candiani (2)	23	23	Right	0	0	0
33		30	30	Right	0	0	0
34		46	45	Bilateral	2	0	0
35		38	37	Right	2	0	0
36		29	27	Right	0	0	0
37		22	21	Right	0	0	0
38	Goh (1)	22	20	Right	?	?	?
39	Present cases	30	28	Right	0	0	0
40		29	26	Right	1	0	0

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