Ann Med Res 2020;27(10):2661-4

Annals of Medical Research

DOI: 10.5455/annalsmedres.2020.05.473

Original Article

Colorectal invasion of endometriosis

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Abstract

Aim: Endometriosis is a common gynecological disorder affecting women of reproductive age. The localization and stage of endometriosis determine the clinical course of the disease. In this study, colorectal invasion in endometriosis cases were evaluated retrospectively.

Material and Methods: Between January 2011 and December 2019, female patients aged 18-60 that had undertaken colonoscopy examinations, appendectomies, colorectal resections and bowel shave was performed to remove mass in the intestinal wall. All results were evaluated retrospectively. After histopathological examinations, the results obtained, including findings of endometriosis were included in the study.

Results: The mean age of patients was found to be 41.78±2.03. 30078 patients who had colonoscopy and rectosigmoidoscopy only two endometriosis was found(0.06%). Five out of 554 colorectal resection specimens (0.9%) and 8 out of 1516 appendectomy specimens were detected with endometriosis. Endometriosis was detected in 3 other cases with an invasive mass on the colon wall during gynecological operations and finally, in one patient holding the entire intestinal system along with the peritoneal surfaces in the abdomen. Altogether 19 cases of endometriosis were detected, 42% was invasion of the appendix tissue (most common) and the rectum being second with 21% most common localization.

Conclusion: Colorectal invasion of the endometriosis is a rare clinical condition. The radiological appearance of the lumen obstruction could be confused with malignancy, cases that have not been diagnosed can visit emergency services with ileus due to lumen obstruction. In these cases surgical treatments are the best treatment option.

Keywords: Appendix; colon; endometriosis; rectum

INTRODUCTION

Endometriosis is a chronic condition that is often referred to pelvic pain and infertility. It is common among benign gynecological diseases (1-4). It is stated that endometriosis is seen among 5-15% of women during reproductive age (5). Intestinal endometriosis constitutes approximately 20% of these cases (6, 7). The literature states that intestinal endometriosis is most frequently seen in the recto-sigmoid region, followed by the rectum, ileum, appendix and cecum (6-8). Cases of endometriosis invading the intestinal system could show symptoms of diarrhea, constipation, rectal bleeding and pain (9). Intestinal obstruction is rarely seen in these cases. Complete resection is the gold standard treatment option in these patients presenting with clinical symptoms and obstruction (1).

In this study, the data obtained from endometriosis cases with colorectal invasion were evaluated retrospectively.

MATERIAL and METHODS

Colonoscopy, rectosigmoidoscopy, appendectomies, colorectal resections and bowel shave examinations were performed and evaluated retrospectively on female patients aged 18-60 years old, between January 2011 and December 2019. After histopathological examinations, the obtained results with the detection of endometriosis were included in the study. The age, preoperative period, any surgical procedures performed, postoperative complications, the depth of the endometriosis areas and finally other additional surgical procedures were evaluated.

The ethical consent of this study was obtained (Haydarpasa Numune Training and Research Hospital 2019/62977267-000-11907).

RESULTS

Endometriosis was detected in the rectum mucosa in two of 30078 women who underwent colonoscopy and

Received: 18.05.2020 **Accepted:** 28.09.2020 **Available online:** 21.10.2020
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rectosigmoidoscopy (0.06%). 1516 appendectomy was performed on female patients, 8 of 1516 had invasive endometriosis in appendix (0.5%). 554 colorectal resection was performed on patients, 5 of 554 (0.9%) after histopathological examination results confirmed endometriosis in the intestinal wall. In one case with ileus, ileostomy was opened without resection due to widespread endometriosis foci (peritoneum, small intestine and colon) in the abdomen and the procedure was terminated. It was confirmed that the case was operated 6 months ago due to endometrioma.

During gynecological operation, in three cases due to colon wall invasion; bowel shave was performed. In one case, endometriosis was detected in appendectomy added to the specimen during the surgical procedure performed for endometrial cancer (This case was included in the patients who underwent appendectomy). The mean age of the patients was 41.78 ± 2.03.

Two cases were operated for left colon and rectum cancer, an area of endometriosis, which extends to the colon and rectum muscle layer, was detected besides malignancy. Low anterior resection was performed on a patient who had previously been operated for ileus and had a circular involvement in the rectum. In this case, endometriosis foci were observed in 5 of 35 lymph nodes in surgical specimen. No involvement of the lymph nodes was observed in other resected cases. Again, in this case, an operation and Hartman procedure was performed due to postoperative major anastomosis leakage. It was found that excessive adhesions were observed in the operation lobe during the closure of the colostomy, and ureteroneocystostomy was performed due to right ureteral injuries. It was determined that no complications related to the procedures were encountered in other patients. Data of patients are presented in Table 1.

Table 1. Finding and results of patients with endometriosis

n	Age	Diagnosis or symptoms	Localization	Invasion	Procedures
1	47	Acute appendicitis	Appendix	Serosa	Appendectomy
2	47	Acute appendicitis	Appendix	Muscular layer	Appendectomy
3	35	Acute appendicitis	Appendix	Serosa	Appendectomy
4	37	Acute appendicitis	Appendix	Muscular layer	Appendectomy
5	27	Acute appendicitis	Appendix	Serosa	Appendectomy
6	27	Acute appendicitis	Appendix	Serosa	Appendectomy
7	29	Acute appendicitis	Appendix	Muscular layer	Appendectomy
8	55	Endometrium cancer	Appendix	Serosa	TAH,BSO, Appendectomy
9	38	Constipation, rectal bleeding	Rectum	Mucosa	Colonoscopy
10	49	Constipation, rectal bleeding	Rectum	Mucosa	Colonoscopy
11	41	Left ovarian mass	Left colon	Serosa	USO, mass excision from left colon
12	57	Ovarian cancer	Right colon	Serosa	TAH,BSO, mass excision from right colon
13	52	Myoma uterine	Rectosigmoid	Serosa	TAH,BSO, mass excision from rectosigmoid colon
14	41	Left colon cancer	Left colon	Muscular layer	Left hemicolectomy
15	42	Rectal cancer	Rectum	Muscular layer	Low anterior resection
16	43	Ileus	Ileocecal region	Whole layer of colon	Right hemicolectomy
17	50	Ileus	Ileocecal region	Whole layer of colon	Right hemicolectomy
18	42	Ileus	Rectum	Whole layer of colon	Low anterior resection
19	35	Ileus	Peritoneum, small intestine, colon	Whole layer of colon	Ileostomy

TAH: Total abdominal hysterectomy, BSO: Bilateral salpingo oophorectomy, USO: Unilateral salpingo oophorectomy

DISCUSSION

Endometriosis is a benign chronic gynecological disorder, which is when endometrium tissue is outside the normal localization (8), also known to be estrogen dependent. Endometriosis is a disorder which effects women during reproductive age and constitutes a clinic according to its localization. Colonoscopy examination is required for rectal bleeding and constipation complaints in invasive cases up to the intestinal mucosa (9,10). In this study, it was determined that there were rectal bleeding and constipation complaints from patients, detected by colonoscopy examinations. If medical treatments does not ease the invasive endometriosis, patients are then directed to surgical treatments. During surgical procedures, it has been confirmed 10-22% bowel resections are done (1,11-13). Patients treated with surgery were observed with decreased rate of recurrence and serious improvements in symptoms.

The literature emphasizes that endometriosis in the intestinal system is commonly seen in the sigmoid colon however, in this study it was found that it was mainly located in the appendix tissue(42%). In patients undergoing appendectomy only one case acute appendicitis was detected, while other cases showed appendix tissue was normal. Rectum localization was found to be second in accordance with the literature (21%).

Intestinal endometriosis cases obstructions can be applied due to luminal stenosis and surgery is the gold standard treatment option in these cases (14-16). In this study, surgery was performed in 4 of 19 cases (21%) due to ileus, and circular involvement was observed in these cases.

Endometriosis foci's were detected in 5 of 35 lymph nodes of the low anterior resection specimens. In the literature, it is stated that further studies should be conducted to determine if lymphatic tissues are due to endometriosis in the intestine and that patients with intestinal involvement may be different from those of uterosacral or vaginal endometriosis (17,18). Although it is stated that lymph node involvement of endometriosis is rarely seen, lymph node dissection is recommended with endometrial tissue however, it is not a malignant disorder (14). In endometriosis cases, surgical procedures become difficult due to adhesions occurring in the intestinal system and the risk of developing complications increases. Again, it reminds us to be careful about the complications that may occur in cases of invasive intestinal endometriosis.

Due to these adhesions, there is an increasing possibility of complications developing in endometriosis cases. Obstruction in the rectal region caused by endometriosis cases, to decrease the chance of complications occurring a loop colostomy will be opened, the edema and diameter difference in the colon will be reduced including resection planning in elective conditions. In the literature, it is emphasized that complications will increase in surgical procedures performed in cases of endometriosis invading the intestinal system (19,20).

Intestinal system or gynecological malignancies can be seen together in endometriosis cases (14). These endometriosis cases may appear as separate masses, in the intestinal wall in gynecological or colorectal operations. In this study, while endometriosis was detected in four gynecological operations, due to two colon malignancies a resection specimen was performed and endometriosis was detected.

The literature review states that endometriosis could be associated with ovarian malignancies and may increase the risk of the duration of the disease (21). The spread of invasive endometriosis to other tissues is a behavior seen in malignant diseases. This invasion causes an assorted appearance with malignancy, in cases located in colorectal of endometriosis. Radiological detection of colorectal endometriosis that causes luminal obstruction in the preoperative period can be quite difficult (22). For patients who come with these findings, a treatment can be planned, considering the malignancy.

CONCLUSION

In conclusion, cases of endometriosis involving the gastrointestinal tract occur rarely. Also, it is important not to ignore the presence of gastrointestinal symptoms in women during the reproductive period. In cases of endometriosis with colorectal invasion, unblocresection without obstruction is the most effective treatment option after diagnosis.

Competing interests: The authors declare that they have no competing interest.

Financial Disclosure: There are no financial supports.

Ethical approval: The ethical consent of this study was obtained (Haydarpasa Numune Training and Research Hospital 2019/62977267-000-11907).

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