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A case of a colo-ovarian cyst fistula as a complication of endometriosis

Marc Paul Jose Lopez, Arjel Davac Ramirez, Sittie Aneza Camille Amad Maglangit, Hermogenes J. Monroy III

ABSTRACT

We present a 45-year-old female with a 20-year history of abdominopelvic pain during menstruation and a gradually enlarging abdominal mass. The initial impression was a malignant ovarian new growth for which she underwent exploratory laparotomy. Intraoperatively, the ovaries have been converted to a large endometriotic cyst. The right ovarian cyst was adherent to the sigmoid colon and a fistulous tract was appreciated between the two structures. The patient underwent a total hysterectomy with bilateral salpingo-oophorectomy en bloc sigmoidectomy. Her postoperative course was unremarkable and she was discharged on the fifth postoperative day.

Key words: *Colo-ovarian cyst fistula, endometriosis, endometriotic cyst, sigmoid colon*

Introduction

Endometriosis is a debilitating condition associated with cyclical menstrual pelvic pain and infertility. In one study, the estimated prevalence of the disease in clinic populations varied from 4 to 50 percent [1]. In another study, 5 to 15 percent of women of reproductive age were found to have endometriosis [2].

Endometriotic ovarian cysts or "chocolate cysts" because of their characteristic melted dark chocolate-like content that is actually an accumulation of old blood during menstrual period, are one of the many complications of endometriosis. This cyst has the propensity to increase in size causing symptoms that are mainly related to its mass effect. Ruptures can occur in huge cysts and this prompts emergent operation. Adherence to other intra-abdominal organs with formation of a fistulous connection is one of its rare complications.

We searched the literature and found two documented cases of colo-ovarian cyst fistula - one as a complication of diverticular disease, and another from a cystadenocarcinoma of the ovary [3]. We were not able to find a case report about a colo-ovarian cyst fistula as a complication of endometriosis. This makes the proceeding case of interest.

The Case

This is the case of a 48-year-old female, nulligravid, who suffered cyclical abdominopelvic pain and a gradually enlarging intraabdominal mass. She said that mass was first noted 20 years ago. There was also note of weight and occasional right lower quadrant pain. No symptoms related to the gastrointestinal tract were ob-

Author affiliations : *Department of Surgery, Philippine General Hospital, University of the Philippines Manila, Metro Manila, Philippines*
Correspondence : *Marc Paul Jose Lopez, MD, Department of Surgery, Philippine General Hospital, University of the Philippines Manila, Metro Manila, Philippines e-mail: ancoylopez@gmail.com*
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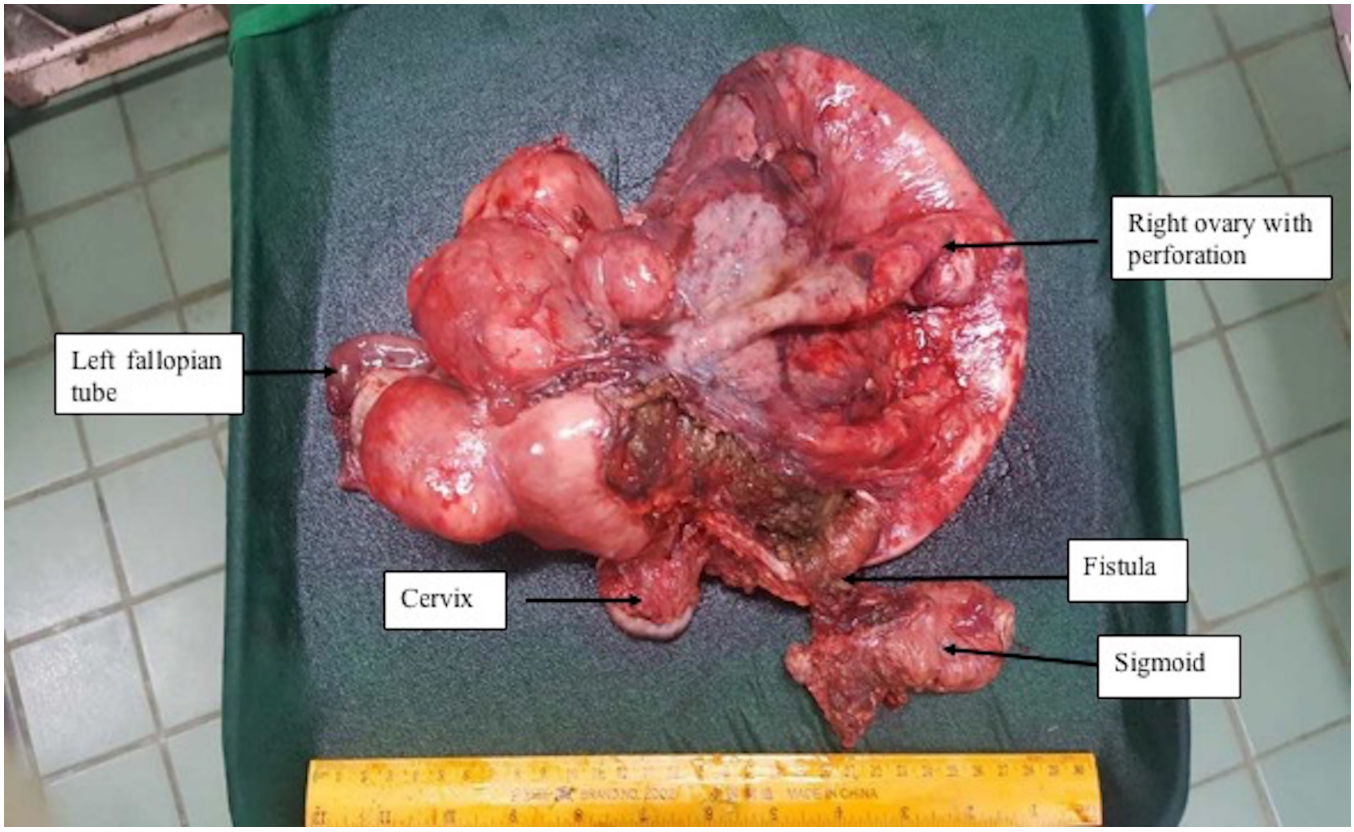

Figure 1. The posterior view of the specimen. UP-PGH, 2017.

served. An increase in the frequency and intensity of the abdominal pain finally prompted consult.

Diagnostic examinations were performed that included a computed tomography (CT) scan of the abdomen. This revealed a huge abdominopelvic mass measuring 25 x 20 x 10 cm, which originated in the ovaries. The mass also showed features of malignancy. A fistulous connection between the ovarian cyst and the colon was not appreciated on contrast imaging.

With a preoperative consideration of a primary malignant ovarian new growth, the patient was prepared for surgery. Intraoperatively, the right ovary was converted to a 25 x 20 x 15 cm cystic mass. This was adherent to the sigmoid colon and the posterior aspect of the uterus (Figure 1). The mass was inadvertently perforated and was noted to contain chocolate-colored viscous fluid that was admixed with feculent material. A fistulous tract was appreciated between the cyst and the antimesenteric side of the mid-sigmoid colon. The left ovary was converted to a smaller sized "chocolate cyst". The uterus was irregularly enlarged measuring 18 x 19 x 7 cm, with multiple myomatous protruberances and endometriotic implants on its surface.

A total abdominal hysterectomy with bilateral salpingo-oophorectomy, with en bloc sigmoidectomy was performed. Intestinal continuity was re-established with an end-to-end colo-colonic anastomosis. The patient was subsequently discharged on the fifth postoperative day. The final histopathologic report showed findings consistent with endometriosis.

Discussion

There are various theories regarding the pathogenesis of endometriosis, but the most plausible and widely accepted proposition is the retrograde menstruation theory. The spread of extrauterine endometrial tissue which is implanted ectopically as a result of retrograde menstruation continue to respond to cyclical hormonal changes causing the symptoms of the disease [4].

An endometriotic cyst is formed when an ectopic endometrial tissue is transplanted inside the ovary, where it grows and proliferates. This tissue continues to respond and behave like a true endometrium. During menstruation, it bleeds and sloughs off. The material sheds more over time producing an appearance of endometriotic cyst fluid [4].

Currently, there is no definitive treatment for endometriosis, but there are treatments for pain and infertility related to endometriosis. Several factors will

be considered in the management plan including age, the severity of symptoms, extent of the disease, family history, and whether or not the person desires to have children. Treatment begins pain medications, followed by oral contraceptives and lastly, surgical intervention if medical management fails. Infertility improves with surgical removal of endometriotic implants. If surgical intervention fails, in vitro fertilization is the next option.

In this particular case, wherein a rare incidental finding of a fistulous connection between the ovarian cyst and the sigmoid colon was present, surgical intervention is warranted. Segmental resection of the involved colon with primary end-to-end anastomosis is the recommended surgical approach in managing intestinal fistulas.

Conclusion

Presented with this case, medical practitioners should be aware of the possibility of this rare complication of endometriosis and recognition of such warrant a referral to a specialist for prompt intervention to avoid further complications.

Informed consent has been obtained prior to inclusion of patient in this case.

Conflict of interest statement

The authors have no conflicts of interest to declare.

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