

Endometriotic Rectosigmoid Obstruction Presenting With a Frozen Pelvis-Mimicking Carcinoma

Vijay Naraynsingh, FRCS, Seetharaman Hariharan, MD, Dilip Dan, FRCS, and Alexander Sinanan, MRCP

Abstract

Rectosigmoid endometriosis is a relatively rare condition and may commonly mimic carcinoma. We report a case presenting with frozen pelvis that was unresectable during an emergency laparotomy. Clinically and radiologically it was suspected to be carcinoma and the patient was subjected to radio- and chemotherapy. The lesion was resected during a second laparotomy and was found to be endometriotic mass. A high index of suspicion is necessary to diagnose this condition.

Key Words: rectosigmoid endometriosis, frozen pelvis, preoperative diagnosis

(*J Pelvic Med Surg* 2009;15:29–31)

Intestinal endometriosis has been commonly reported in the literature.^{1–3} Although endometriosis causing colonic obstruction is relatively rare, there have been reports of colonic endometriotic lesions mimicking malignancy that could not be diagnosed preoperatively.^{4,5} However, there is only 1 recent report of colorectal endometrioma causing a frozen pelvis.⁶ We report a case of rectal endometrioma diagnosed to have malignancy by imaging, found to have a frozen pelvis on laparotomy and was subjected to chemotherapy and radiotherapy before resection.

CASE REPORT

An otherwise healthy 46-year-old premenopausal woman presented with an acutely distended abdomen. She also had abdominal pain, obstipation, and vomiting. On examination, she had a tense, grossly distended abdomen with mild generalized tenderness and an empty rectum on digital rectal

examination. Her abdominal radiographs showed distended large bowel loops. An abdominal CT showed a mass (5.2 × 4.9 cm) in the pelvic region adjacent to the uterus right to the midline and was diagnosed to be either rectal carcinoma or ovarian carcinoma with metastases (Fig. 1). Her blood counts and biochemical parameters were normal.

At emergency laparotomy, there was a fibroid uterus which was rigidly adherent to the anterior aspect of the rectum. There was hard irregular mass of the rectosigmoid junction, which was firmly fixed posteriorly to the sacrum. The anterior adhesion of the rectum to the uterus and its posterior fixity to the sacrum resulted in a frozen pelvis. The rectum could not be mobilized for dissection; this was rendered even more difficult by the grossly distended colon. Direct access to the lesion was difficult, thus precluding biopsy for histology. A right upper transverse colostomy was done and the abdomen was closed with the diagnosis of locally advanced rectal carcinoma. Since the lesion seen on CT scan and palpated at surgery was deemed to be an obstructing rectosigmoid carcinoma, colonoscopy was not requested.

The patient was subjected to radiotherapy along with chemotherapy (capecitabine—Xeloda) for 6 weeks with a view to downstage the tumor so that definitive surgery could be done. A repeat CT after this therapy showed that there was a soft tissue mass in the rectum now measuring 3.2 × 2.9 cm suggestive of a neoplasm in the rectosigmoid region.

From the Department of Clinical Surgical Sciences, The University of the West Indies, St. Augustine, Trinidad, West Indies.

Reprints: Seetharaman Hariharan, MD, Department of Clinical Surgical Sciences, Faculty of Medical Sciences, The University of the West Indies, Eric Williams Medical Sciences Complex, Mount Hope, Trinidad, West Indies. E-mail: uwi.hariharan@gmail.com.

Copyright © 2009 by Lippincott Williams & Wilkins

ISSN: 1542-5983/09/1501-0029

DOI: 10.1097/SPV.0b013e31819b6730



FIGURE 1. CT scan image of the mass before the first laparotomy. 1 indicates rectum; 2, mass suspected to be carcinoma; 3, fibroid uterus; 4, urinary bladder.



FIGURE 2. Rectal endometriotic mass after resection.

The patient was subjected to a second laparotomy. Since the colon was not distended, the rectum could be mobilized with some difficulty. However, it was still fixed to the sacrum and the lesion had to be cut off the periosteum with a scalpel. The mass was resected and a colorectal anastomosis done.

The gross appearance of the mass is shown in Figure 2. Histology revealed a normal mucosa of the rectum with endometriosis of the submucosal and muscularis layers. She recovered uneventfully and has no recurrence of symptoms at 4 years.

DISCUSSION

Endometriosis of the colon is still considered a rare entity.⁷ Intestinal endometriosis is usually asymptomatic and complete bowel obstruction occurs in less than 1% of the cases.⁸ Two reports were published earlier from the United Kingdom regarding the

presentation of endometriosis to general surgeons. Endometriosis presented commonly as swellings related to Pfannenstiel incision scar, inguinal swelling, and umbilical nodules.^{9,10} The other presentations included rectal bleeding, appendicitis, ileal obstruction, and urinary symptoms. A relatively recent study from Glasgow also had similar findings.¹¹

The major clinical feature associated with the presentation of extragenital endometriosis is that most of them were never diagnosed preoperatively. They were often diagnosed incidentally during surgery and confirmed by histology.⁹ In our situation, even during the first surgery, this diagnosis was never considered because the obstructing colorectal lesion presented as a hard unresectable mass adherent to the sacrum. Moreover, both clinically and radiologically, the preoperative diagnosis was carcinoma. Most surgeons, even very experienced ones, are likely to consider malignancy for such a presentation.

Furthermore, the preoperative CT scan report in our patient opined that the mass could be either a rectosigmoid carcinoma or ovarian cancer with metastases. It is notoriously difficult to diagnose colonic endometriosis preoperatively by imaging studies and/or colonoscopy.¹² A double contrast barium enema may show this lesion as an extrinsic mass with flattening, tethering, and spiculation of the anterior border of the rectosigmoid region. Less commonly, it may manifest as an annular lesion or as a polypoid intraluminal mass, which may be again mistaken for carcinoma.¹² Although colonoscopy may show rectal stenosis, biopsy may not be helpful.¹³ This may be due to the fact that the mucosa is spared and the lesion involves the submucosa and muscularis as occurred in our case. Other recent imaging techniques such as colonoscopic ultrasonography and virtual CT colonoscopy may assist in diagnosing this condition, although the predictive values of these techniques are unknown.^{14,15} An earlier report has advocated the value of MRI in diagnosing colonic endometriosis.¹⁶ In our

situation, because of the emergency presentation, we did not have the opportunity to do many imaging studies other than the radiograph and CT scan. These imaging techniques and surgical findings during laparotomy led us to the diagnosis of colon carcinoma.

In our case, the lesion did become operable after the chemotherapy and radiotherapy and could be removed completely. This may be because the bowel was no longer obstructed and distended, and the associated edema in the region had settled completely. In addition, there is some reported benefit of radiotherapy in refractory endometriosis.¹⁷ Hence, in our case it may be argued that the radiotherapy might have assisted in "thawing" the frozen pelvis to render it operable.

As mentioned earlier, colonoscopy and biopsy may not have been conclusive. Although drugs such as danazol and the oral contraceptive pill could theoretically offer some benefits in endometriosis, surgery is the most definitive treatment in colonic endometriosis. Additionally, colonic endometriosis itself may become malignant as endometrial carcinoma within the bowel.¹⁸

In summary, rectosigmoid endometriosis is a relatively rare condition and may commonly mimic carcinoma. Because it can evade preoperative diagnosis by routine imaging studies and colonoscopy, even in experienced hands, a very high index of suspicion is crucial to contemplate this diagnosis and avoid unnecessary radio- and chemotherapy.

REFERENCES

1. Paksoy M, Karabiçak I, Ayan F, et al. Intestinal obstruction due to rectal endometriosis. *Mt Sinai J Med.* 2005;72:405-408.
2. Jarmin R, Idris MA, Shaharuddin S, et al. Intestinal obstruction due to rectal endometriosis: a surgical enigma. *Asian J Surg.* 2006;29:149-152.
3. Lin YH, Kuo IJ, Chuang AY, et al. Extrapelvic endometriosis complicated with colonic obstruction. *J Chin Med Assoc.* 2006;69:47-50.
4. Varras M, Kostopanagiotou E, Katis K, et al. Endometriosis causing extensive intestinal obstruction simulating carcinoma of the sigmoid colon: a case report and review of the literature. *Eur J Gynaecol Oncol.* 2002;23:353-357.
5. Mizrahi S, Mayzler O, Goldstein D, et al. Endometriosis simulating a colonic obstructive neoplasm. *Eur J Surg Oncol.* 2003;29:766-767.
6. Mourthé de Alvim Andrade M, Batista Pimenta M, de Freitas Belezia B, et al. Rectal obstruction due to endometriosis. *Tech Coloproctol.* 2008;12:57-59.
7. Chaer R, Sam A II, Teresi M, et al. Endometriosis-induced acute small and large bowel obstruction: rare clinical entities. *N Z Med J.* 2005;118:U1521.
8. de Bree E, Schoretsanitis G, Melissas J, et al. Acute intestinal obstruction caused by endometriosis mimicking sigmoid carcinoma. *Acta Gastroenterol Belg.* 1998;61:376-378.
9. Singh KK, Lessells AM, Adam DJ, et al. Presentation of endometriosis to general surgeons: a 10-year experience. *Br J Surg.* 1995;82:1349-1351.
10. Khetan N, Torkington J, Watkin A, et al. Endometriosis: presentation to general surgeons. *Ann R Coll Surg Engl.* 1999;81:255-259.
11. Douglas C, Rotimi O. Extragenital endometriosis—a clinicopathological review of a Glasgow hospital experience with case illustrations. *J Obstet Gynaecol.* 2004;24:804-808.
12. Yildirim S, Nursal TZ, Tarim A, et al. Colonic obstruction due to rectal endometriosis: report of a case. *Turk J Gastroenterol.* 2005;16:48-51.
13. Midorikawa Y, Kubota K, Kawai K, et al. Endometriosis of the rectum causing bowel obstruction: a case report. *Hepatogastroenterology.* 1997;44:706-709.
14. Roseau G, Dumontier I, Palozzo L, et al. Rectosigmoid endometriosis: endoscopic ultrasound features and clinical implications. *Endoscopy.* 2000;32:525-530.
15. Tzambouras N, Katsanos KH, Tsili A, et al. CT colonoscopy for obstructive sigmoid endometriosis: a new technique for an old problem. *Eur J Intern Med.* 2002;13:274-275.
16. Eguchi S, Komuta K, Haraguchi M, et al. MRI facilitated a diagnosis of endometriosis of the rectum. *J Gastroenterol.* 2000;35:784-788.
17. Kim KS, Moon WS, Song HW, et al. A case of persistent endometriosis after total hysterectomy with both salpingo-oophorectomy managed by radiation therapy. *Arch Gynecol Obstet.* 2001;265:225-227.
18. Jones KD, Owen E, Berresford A, et al. Endometrial adenocarcinoma arising from endometriosis of the rectosigmoid colon. *Gynecol Oncol.* 2002;86:220-222.