# Primary Carcinoma of the Rectovaginal Septum Diagnosed as Uterine Prolapse

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## Abstract

**Background:** Primary carcinoma of the rectovaginal septum is very rare. Most cases are associated with documented endometriosis, and patients will often present with vaginal or rectal bleeding.

**Case:** A 47-year-old woman presented to the emergency department complaining of urinary symptoms and "something falling out of the vagina." She was diagnosed initially as having uterine prolapse. However, further investigations and surgery showed that she had a primary papillary serous carcinoma of the rectovaginal septum, and the carcinoma later metastasized to the lymph nodes. No evidence of endometriosis was found. Assessment and subsequent treatment of this aggressive tumour was likely delayed because of its initial benign presentation.

**Conclusion:** Our presentation of the case of a woman with primary carcinoma of the rectovaginal septum not associated with a focus of endometriosis shows that this rare aggressive cancer may present in a clinically benign fashion.

## Résume

**Contexte :** Le carcinome primitif de la cloison recto-vaginale est une pathologie très rare. La plupart des cas sont associés à une endométriose documentée; de plus, les patientes qui en sont atteintes présentent souvent des saignements vaginaux ou rectaux.

**Cas :** Une femme de 47 ans s'est présentée à l'urgence en se plaignant de symptômes urinaires et de « quelque chose tombant du vagin ». Elle s'est d'entrée de jeu vue offrir un diagnostic de prolapsus utérin. Cependant, d'autres explorations et la chirurgie ont révélé qu'il s'agissait plutôt d'un carcinome séreux papillaire primitif de la cloison recto-vaginale; de plus, le carcinome a par la suite envahi les nœuds lymphatiques par métastase. Aucun signe d'endométriose n'a été constaté. Il est probable que l'évaluation et la prise en charge subséquente de cette tumeur agressive aient été retardées en raison du caractère initialement bénin de la présentation du problème.

**Conclusion :** Notre présentation du cas d'une femme présentant un carcinome primitif de la cloison recto-vaginale non associé à un foyer d'endométriose indique que ce type rare de cancer agressif peut se présenter de façon cliniquement bénigne.

**Key Words:** Rectovaginal septum, carcinoma, uterine prolapse, endometriosis

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## INTRODUCTION

Cancers originating in the rectovaginal septum are exceedingly rare. The majority of such cancers are histologically identified as adenocarcinomas.[1–9] Seven of the 11 cases reported in the literature are thought to have arisen from an area of endometriosis. We report a case of primary papillary serous carcinoma of the rectovaginal septum that was not associated with endometriosis and describe the unique way it presented.

## THE CASE

Mercedes (pseudonym), a 47-year-old woman, presented to the emergency department with a one-month history of left lower quadrant pain and a sensation of "something falling out of the vagina." The pain was worse when she was standing and had been increasing in intensity over the preceding two weeks so that she had become unable to work. Mercedes reported difficulty maintaining urinary continence; she had also had post-voiding urinary urgency. She had delivered one child vaginally with forceps assistance. She was sexually active and denied having dyspareunia or back pain. Her menstrual cycle had been irregular for the previous six months. There was no gynaecologic history to suggest endometriosis. She had a history of anemia and removal of a benign colonic polyp 10 years previously. There was a family history of nasopharyngeal and colon cancers.

On examination by the emergency physician, the abdomen was benign but the uterus protruded midway down the length of the vagina. A diagnosis of uterine prolapse was made, and an outpatient referral was made for placement of a pessary. A subsequent examination by a urogynaecologist, however, identified a firm, irregular, fixed mass arising posterior to the vaginal vault, which was not in keeping with uterine prolapse. Subsequently an ultrasound examination of the pelvis showed a complex cystic mass of mean diameter 5 cm in the posterior cul-de-sac. The serum CA-125 level was 487 U/mL (normal < 35). The patient was then referred to the gynaecologic oncology service.

A follow-up computed tomography (CT) scan of the abdomen and pelvis identified a solitary lesion (of mean diameter 5 cm) between the posterior wall of the vagina and the anterior wall of the rectum. There was no evidence of intraluminal extension or obstruction, but a significant mass effect was observed with compression of the vagina anteriorly against the base of the bladder. There was no evidence of lymphadenopathy. The uterus was bulky, the left ovary was normal, and the right ovary was poorly visualized. Although subsequent cystoscopy was normal, rigid sigmoidoscopy could be carried out only to a distance of 5 cm because of the mass effect in the rectal lumen. After informed consent was obtained, Mercedes was scheduled for an exploratory laparotomy and total abdominal hysterectomy and bilateral salpingo-oophorectomy, with tumour staging if necessary.

At the time of surgery, pelvic examination under anaesthesia resulted in approximately 100 mL of mucoid fluid and blood being extruded from the vagina. Following this extrusion, a cavity could be palpated adjacent to the left side of the cervix. At laparotomy, the uterus was found to contain leiomyomas, the left ovary had an irregular surface but was not enlarged, and the right ovary was unremarkable apart from a 0.5cm cyst. Total abdominal hysterectomy with bilateral salpingo-oophorectomy was then performed. During the course of this procedure, a 4- x 3-cm mass was palpated within the rectovaginal septum. A biopsy of the mass was taken, and intraoperative frozen section showed an undifferentiated adenocarcinoma. Further tissue from this mass was removed with the uterus, cervix, and portion of the vaginal vault, although residual tumour remained. Exploration of the remainder of the pelvis and upper abdomen showed no palpable lymphadenopathy and no evidence of endometriosis. Given its location, the mass was not obviously of gynaecologic origin, and the colorectal surgery service was consulted intraoperatively. Because it was felt that the mass might represent metastatic carcinoma from another primary site, it was decided to suspend further dissection of the mass until a final histology report was available postoperatively.

The final pathology report concluded that the histology of the mass was consistent with a high-grade papillary serous carcinoma. The recommended management (from the local multidisciplinary review board) was to proceed with three cycles of carboplatin and Taxol chemotherapy, followed by a repeat CT scan to assess the value of debulking surgery. However, two weeks postoperatively, the patient returned complaining of rectal pressure, tenesmus, and passage of bright red blood per rectum. Colonoscopy showed a near-obstructing rectal tumour, from which biopsies demonstrated metastatic high-grade serous carcinoma in keeping with the patient's original diagnosis.

After chemotherapy was complete, the repeat CT scan showed no significant reduction of tumour volume. There was no identifiable lymphadenopathy. The planned subsequent management of proctectomy and upper vaginectomy to debulk the tumour was cancelled when an enlarged para-aortic node containing metastatic carcinoma was identified. Management then became palliative in nature, and a small bowel resection was performed with sigmoid colostomy. The patient was discharged home on the sixth postoperative day and was deemed to have had suboptimal debulking of her tumour. She then went on to receive Caelyx second-line chemotherapy but, despite this, developed supraclavicular lymphadenopathy and anuria. She died shortly thereafter.

### *Pathologic Findings*

The main specimen was submitted attached to the cervix and uterus. It had a dark red hemorrhagic appearance and measured 4.5 x 3.0 x 1.5 cm. Grossly, the tumour mass did not appear to extend to the exocervical rim, but there was some evidence of invasion microscopically. The invasive component did not involve or arise from cervical mucosa, and it showed no evidence of vaginal or rectal mucosa. There was no evidence of papillary serous carcinoma in the uterus, ovaries, fallopian tubes, or peritoneal lavage fluid.

The Figure is a high-power (400x) colour photomicrograph (stained with hematoxylin and eosin) of tissue from the tumour mass demonstrating a high-grade papillary serous carcinoma. It shows a nest of high-grade serous carcinoma with a mitotic figure and a psammoma body. The carcinoma stained positively with cytokeratin 7 and negatively with cytokeratin 20, monoclonal carcinoembryonic antigen (CEA), thyroid transcription factor 1(TTF1), and Calretinin. This profile is supportive of a mullerian tract origin for the tumour.

The para-aortic node from the second surgery measured 2.1 x 1.7 x 1.2 cm and showed metastatic, poorly