

# Single vaginal metastasis from cancer of the right colon: case report

Metástase vaginal isolada de câncer de cólon direito: relato de um caso

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## ABSTRACT

Vaginal metastases of colonic origin are exceedingly rare. When present, the prognosis is poor, and most individuals do not survive past 40 months. Surgical excision and radiotherapy have been used to treat this type of lesion. **Case:** A 67-year-old woman went to the Oncology Surgery Service with complaints of vaginal discharge and local pain. On physical examination, a 2.5 cm nodular lesion was found in the vagina. She had undergone a right hemicolectomy for a right colon cancer three months earlier. Punch biopsy was performed, and histological examination of the specimen showed metastasis of colonic adenocarcinoma. Subsequently, she underwent both radical wide excision and localized adjuvant radiotherapy. Four years later, the patient is asymptomatic, with no signs of local or systemic recurrence. Despite the rarity of this entity and its usually poor outcome, surgical treatment for isolated vaginal metastases of colonic origin is an appropriate therapeutic option with effective local control associated with low morbidity.

**Keywords:** Vaginal neoplasms/secondary; Neoplasm metastasis; Colorectal cancer; Case reports

## RESUMO

A metástase vaginal de origem colônica é considerada um evento extremamente incomum. Quando presente, o prognóstico é negativo, haja vista que a maioria dos indivíduos não sobrevive mais que 40 meses. A excisão cirúrgica ou até mesmo a radioterapia têm sido usadas para o tratamento desse tipo de lesão. **Caso:** Paciente de 67 anos procurou o Serviço de Oncocirurgia com queixas de leucorreia e dor. Ao exame físico apresentava lesão nodular de 2,5 cm em vagina. Como antecedente pessoal havia sido submetida a uma hemicolectomia direita por câncer de cólon direito

(três meses). Subsequentemente realizou-se uma biópsia por *punch*, cujo exame histológico demonstrou tratar-se de uma metástase de adenocarcinoma de cólon. Isolada, a paciente foi submetida a uma ressecção ampla da lesão que foi complementada com radioterapia localizada. Após quatro anos, a paciente se apresenta assintomática e sem sinais de recidiva local ou sistêmica. Apesar da raridade da presente entidade e sua péssima evolução, o tratamento cirúrgico da metástase isolada de vagina de origem colônica representa uma opção terapêutica adequada, com eficaz controle local e está associada à baixa morbidade.

**Descritores:** Neoplasias vaginais/secundário; Metástase neoplásica; Neoplasias colorretais; Relatos de casos

## INTRODUCTION

Colorectal cancer is one of the most common types of cancer in Western countries. In the United States of America, it ranks fourth as cause of cancer. Although frequently detected, it is associated with high mortality rates<sup>(1)</sup>.

The most frequent sites for systemic spreading are the liver and lungs. More rarely, the disease spreads to the brain or bones. On the other hand, true vaginal metastases from colonic cancer are extremely rare<sup>(1-2)</sup>. The present report describes a case of single vaginal metastasis from right colon cancer. This patient underwent a local resection with wide margins plus pelvic radiotherapy. To date, four years later, the patient continues to do well without local or systemic recurrence.

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## CASE REPORT

The patient was a 67-year-old woman who had previously undergone both total abdominal hysterectomy with bilateral adnexectomy, due to uterine leiomyomatosis (eight years earlier) and right hemicolectomy due to right colon adenocarcinoma (three months earlier).

With regard to her right colon cancer, histology revealed a moderate-grade adenocarcinoma that invaded the serosa. There were no positive lymph nodes, nor was vascular-lymphatic embolization present. The TNM staging classification was T3N0MX. The CEA level was 2.11 U/ml. The patient did not receive any adjuvant treatment.

Three months after right hemicolectomy, the patient was again referred to the hospital with a complaint of both vaginal bleeding and local pain. At hospital admission, a 2.5 cm (in diameter) vaginal nodule was found. It was an ulcerated and fungus-like lesion on the left anterolateral face of the vagina. This lesion was 2.5 cm apart from the urethral meatus (Figure 1, A and B). A punch biopsy was performed. Histological analysis of the specimen showed a moderately differentiated adenocarcinoma.

She, then, underwent abdominal and thoracic tomography, which did not show any metastatic disease. The CEA level was 1.7 U/ml. Therefore, she underwent local resection with wide margins but sparing the urethra, and with primary closure. This procedure was done under local anesthesia and she was discharged home after the procedure. There were no post-operative complications.

The histological analysis showed that this was a moderate-grade adenocarcinoma with free margins. Immunohistochemical analysis showed that it was compatible with a colonic origin (Table 1). She underwent adjuvant radiotherapy (radiation dose 45 Gy). To date, four years later, the patient remains well. There has not been any evidence of local or distant recurrence.

**Table 1.** Immunohistochemical panel

Immunohistochemical marker	Result
Vimentin	Negative
Desmin	Negative
Actin	Negative
Cytokeratin 20	Positive
Cytokeratin 7	Positive
CD 45	Negative
HMB 45	Negative
S 100	Negative

## DISCUSSION

True vaginal metastases from colon cancer are very rare. The most frequent metastases sites are liver, lungs, ovaries, and bones. Primary vaginal tumors are uncommon too; they represent only 1% of gynecological neoplasms. Among the primary vaginal tumors, squamous cell carcinoma is the most common histological type<sup>(2)</sup>. Primary vaginal adenocarcinoma is an infrequent neoplasm that was associated to exposure to diethylestilbestrol in the uterus<sup>(3)</sup>.

The first description of this presentation was made in 1956, by Whithelaw et al., who described a case of vaginal metastasis from sigmoid adenocarcinoma<sup>(4)</sup>. Raider<sup>(5)</sup> presented a series of four cases of true vaginal adenocarcinoma from colonic cancer. These lesions were found between 4 and 41 months after colonic resection. The overall survival was less than 40 months in three cases.

Nonetheless, after the ovaries, the organ of the genital female tract that is most affected is the vagina<sup>(6)</sup>. In spite of such occurrences, the prevalence of colonic vaginal metastasis is low. The most common tumors that spread to the vagina are cervical, endometrial and renal cancer<sup>(7-9)</sup>. Vaginal metastases can arise from different primary tumors, such as tumors of the genital or urinary systems. Vaginal metastases from ovarian or bladder



**Figure 1 - A and B:** A 2.5-cm (diameter) nodular lesion in the left anterolateral vaginal aspect (2.5 cm away from the urethral meatus)

tumors were described a few times<sup>(10)</sup>. These metastases are located close to the uterine cervix, generally in the upper portion of the vagina. Conversely, they are found less frequently in the lower portion<sup>(4)</sup>.

The majority of vaginal metastases from colonic cancer have left or sigmoid colon origin<sup>(2,4-6)</sup>. The most commonly observed means of spreading is local invasion. Nevertheless, other means of spreading can be found such as hematogenous, lymphatic and transcoelomic types<sup>(2,10-12)</sup>. Lymphatic spreading was attributed to a retrograde route. This is common sense when the primary tumors are located in the left or even sigmoid colon. This form of spreading was related to drainage from mesenteric lymphatic nodes. There could be spreading to the iliac nodes, finally arriving at the anterior aspect of the vagina<sup>(1)</sup>. In the present case report, we believe that no lymphatic spreading had taken place, since the excised right colon had no lymph node involvement. On the other hand, like Ng et al., we believe that transcoelomic spreading may have occurred. These authors suggested that tumor cells could be implanted in the fallopian tube or uterus. Subsequently, they could be inserted in the vagina<sup>(10)</sup>.

Generally, vaginal metastases from colonic cancer are associated with advanced disease with a dismal prognosis. Nevertheless, there are few reports of long-term survivors when the lesion is restricted to the vagina<sup>(2,6)</sup>. The therapeutic approach for single vaginal lesions has been both wedge resection and radiotherapy. Chemotherapy has been reserved for patients that present multiple metastatic sites. However, chemotherapy is ineffective and only a minority of patients attain long-term survival<sup>(6,13)</sup>.

## CONCLUSIONS

In our view, because of both low morbidity and better quality of life associated with local resection,

we recommend this approach for isolated vaginal metastases from colon carcinoma. It may happen, as in the case described, that long-term survival can be attained, although almost all cases present a generally poor prognosis.

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