Revista Mexicana de Coloproctología
Vol. 13, No. 1
Enero-Abril 2007
pp 24-26

Caso Clínico-Quirúrgico y Revisión del tema

Neoplasia occurring at the colostomy site: Report of two cases and review of the literature

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Abstract

Carcinomas rarely occur in the colostomy site. The risk of developing malignancy is similar to any other colonic segment. However, if the initial resection was due to cancer, the incidence of metachronic cancer significantly increases compared to the general population. The incidence of colonic metachronic cancer is generally 3 to 5%. When associated with the ostomy site the recurrence of the primary tumor can manifest with bleeding or obstruction. We report two cases of patients with tumor at the colostomy site, the clinical manifestation and the management adopted.

Key words: Colorectal cancer, colostomy, metachronic tumor, complications of colostomies.

Resumen

La aparición de carcinomas en el sitio de la colostomía es rara. El riesgo para el desarrollo de neoplasia maligna es semejante en cualquier otro segmento del colon. Sin embargo, si la resección inicial se debió a un cáncer, hay un aumento significativo de la incidencia del tumor metacrónico si la comparamos con la población en general. La incidencia del tumor metacrónico del colon es generalmente de 3 a 5%. La recurrencia del tumor primario cuando está asociado a la colostomía, se puede manifestar con sangramiento u obstrucción. Relatamos dos pacientes con tumor en el sitio de la colostomía, sus manifestaciones clínicas y la conducta terapéutica adoptada.

Palabras clave: *Cáncer colorrectal, colostomía, tumor metacrónico, complicaciones de la colostomía.*

Preparing a colostomy with the objective of temporarily or definitively deviating colonic transit is not a risk-free procedure even when performed with proper surgical technique.

Local complications can appear in the immediate, early or late postoperative period, with an incidence ranging from 15 to 30%. The most common include necrosis of the colostomy, dermatitis, abscess, or bleeding, retraction, stenosis, para-ostomy hernia, prolapse, colocutaneous fistula, perforation to the peritoneal cavity and less commonly the appearance of neoplasia.[1-3]

The appearance of benign or malignant neoplasia in the colostomy seems to be related to various factors, among them colonic metaplasia secondary to a chronic inflammatory disease.[4] The presence of a metachronic neoplastic lesion, colectomy with inadequate safety margins,[5] colonic polyposis[2] and the implant or recurrence of the tumor,[6,7] are also factors that lead to the appearance of neoplasia in the colostomy.

Because of its importance and its low frequency, we report two cases of patients that developed a neoplastic lesion in the colostomy, describing its clinical manifestation and the management adopted.

CASE REPORTS

Case 1: ECS, a 27-year-old female submitted two years previously to a left colectomy with terminal colostomy, due to obstructive neoplasia of the sigmoid. The pathological examination reported a stenosing, moderately differentiated tubular adenocarcinoma with invasion of the pericolic adipose tissue, and with extensive perineural invasion. However, vascular invasion was not observed, the surgical margins were free and no metastases were noted in twelve mesocolic lymph nodes analyzed. The patient was staged as Dukes B and Astler-Coler B2, and was indicated for radiotherapy and adjuvant chemotherapy.

She was admitted on our service six months ago complaining of pain, bleeding in the pericolostomy region and difficulty in elimination of feces after the appearance of a mass in the colostomy site *(Figure 1)*. Staging examinations reported the disease as peritoneal carcinomatosis.

Because of this finding, local surgical treatment associated with clinical oncological support was realized. The tumor resected in the colostomy measured 4.7 x 3.5 x 3.0 cm, with a pathologic diagnosis of metastatic moderately differentiated adenocarcinoma. The patient died two months postoperatively due to progress of the disease.

Case 2: TAF, a 63 year-old male, submitted to Miles Surgery for adenocarcinoma of the rectum in 1993 associated with chemotherapy and radiotherapy and who had not returned for follow-up for ten years. In 2003, he presented with a mass in the abdominal wall of the paracolostomy region, paracolostomy hernia and an intraluminal vegetating-ulcerous lesion located six centimeters from the skin margin. The pathologic examination of the biopsy specimen removed at colonoscopy, reported a moderately differentiated adenocarcinoma. The abdominal CAT scan showed a heterogenous mass, measuring 7.6 x 5.8 centimeters, involving the paracolostomy abdominal wall without affecting the intracavitary organs.

He underwent a wide resection of the neoplasm, including the colostomy and the adjacent abdominal wall *(Figure 2)*, descending colon and distal 2/3 of the transverse colon with a new terminal colostomy in the right upper quadrant. The patient presented a good outcome, underwent chemotherapy and presently is asymptomatic.

DISCUSSION

Multiple tumors in the colon can occur as synchronous or metachronous cancers,[8] with a respective incidence of 2-3% and 3-5%.[9] A metachronous tumor is considered to be one that recurs in the same organ or in remaining segments that were partially resected, once the conventional five-year cure period is over. Nevertheless, this five-year cure period is not completely accepted, since the interval for the appearance of a second tumor termed metachronous[10] can range from two to four years.

We know that two years is the minimum time necessary for an adenomatous polyp to change into adenocarcinoma, therefore, all neoplasia developed during this period should not be termed metachronous, but should be defined as synchronous to the primary tumor.[11] The presence of carcinoma in the colostomy site is not common, nevertheless its appearance can occur with time and progresses with high rates of morbidity-mortality.[5-8]

Considering that colostomy is an exteriorized segment of the colon with the same predisposing and provoking factors for development of a primary colonic tumor, it is accepted that the neoplastic risk is similar to that of any other portion of the colon, and is markedly elevated when associated with a metachronic lesion.[12] This situation occurred in case 2, in which a new neoplastic lesion next to the colostomy appeared ten years after the first surgical intervention.

In case 1, due to the short time period existing between the surgery and the development of neoplasia in the colostomy site, we should consider it as a synchronous lesion.

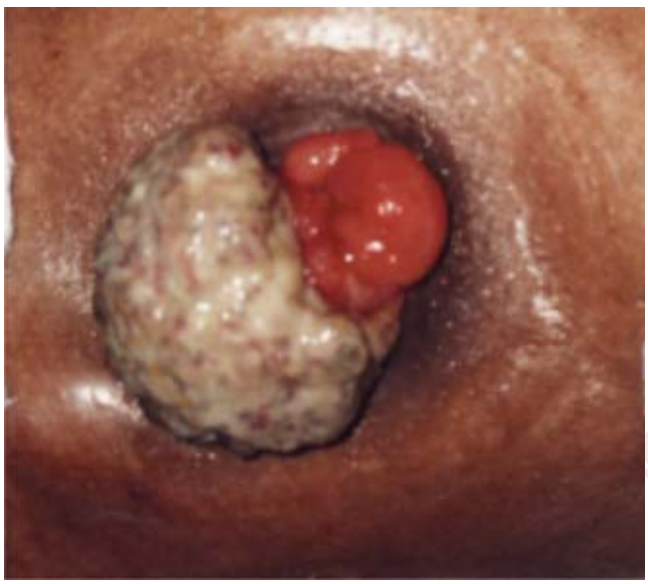

Figure 1. *Case 1.*

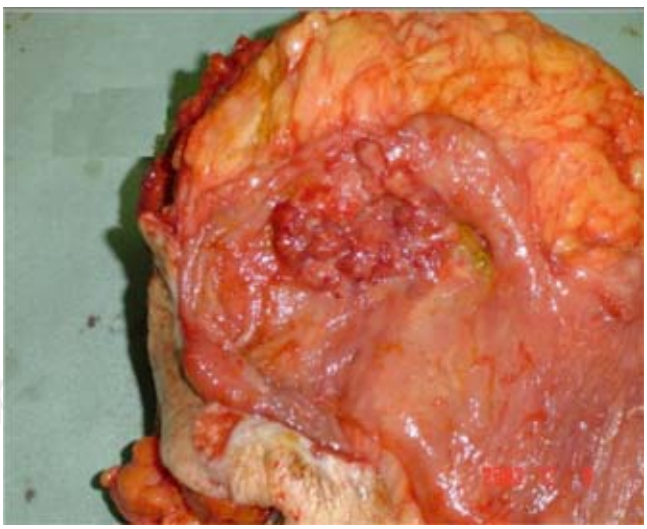

Figure 2. *Case 2.*

A lesion can recur because of development of a new tumor (metachronic), consequent to an incomplete resection, by the surgical implant of malignant cells in the anastomotic line or in raw surfaces,[6] by the association of a synchronous lesion,[5] and secondary to local trauma on the colonic mucosa.[4,8] A latent period of 20 to 25 years after realization of colectomy and diverse factors for the appearance of neoplasia at the colostomy site[13] are possible, as observed in the two cases, in which differing etiologies were responsible for the recurrence. The chronic inflammatory process found in the intestinal mucosa of patients with inflammatory disease, especially of non-specific ulcerative rectocolitis, is considered the structural basis for malignant degeneration found in patients with ostomies.[4] These patients are more prone to colostomy complications, as well as those with familial adenomatous polyposis, that in the progress of adenoma-adenocarcinoma present the possibility of developing carcinoma in the ostomy.[14]

Currently the widespread use of colonoscopy in the study of colorectal diseases or postoperative followup, of oncological resections, diagnosing and removing premalignant lesions, has led to an important reduction in the incidence of metachronic colorectal cancer. Clinically the presence of local tumor, intestinal bleeding and/or intestinal obstruction in the course of tumor recurrence at the colostomy site can be identified.[4] This was individually present in the two cases reported and was what called our attention to the correct clinical-surgical diagnosis.

Two distinct cases of neoplasia at the colostomy site, with specific management based on the clinical characteristics of each patient and the pathological examination are presented. In the first case, because the patient was in an advanced stage of the neoplastic illness (peritoneal carcinomatosis) we opted for local resection, aiming only to improve the colostomy function, which was satisfactory in the postoperative period. In the second case, the management recommended in the literature, was adopted. It consisted of broad local resection including the abdominal wall with replacement of the colostomy,[2,4,5,9,15] with wide resection of the muscle-aponeurotic leaflets of the abdominal wall. In addition since the lesion was restricted to the colostomy site it required placement of a polypropylene prosthesis for its reconstruction.

Neoplasia of the colostomy site occurs in frequently, progressing with few but evident clinical signs, and its early diagnosis is the best way of controlling the disease. The alert intervention of the stomatherapist and the surgeon, can determine a low morbidity and a better chance of survival for the ostomized patient.

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