

# A Case of Spontaneous Regression of Advanced Colon Cancer

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**Abstract.** *A case of spontaneous regression of colon cancer is reported. The patient, an 80-year-old man, was referred to hospital in January 2004. Colonoscopy revealed a type 2 tumour in the transverse colon which was diagnosed as an adenocarcinoma. A computed tomography scan also revealed a right renal tumour. Urological examination disclosed renal cell cancer. The patient subsequently refused surgical treatment and did not visit the hospital again for 6 months, during which time he received neither anticancer treatment nor any other medication. Another colonoscopy in August 2004 resulted in reclassification of the tumour to a IIc lesion, and the biopsy was negative for cancer. A right nephrectomy was carried out, and observation was performed for development of colonic lesions. In January 2007, colonoscopy revealed that the IIc lesion had disappeared. The patient was still alive with no sign of recurrence 64 months after disappearance of the lesion. Conclusion: This finding suggests that spontaneous regression can occur in advanced colon cancer.*

Spontaneous regression of solid tumours in adults is rare. It is said to occur when a malignant tumour partially or completely disappears without treatment, or as a result of a therapy that is considered inadequate to exert a significant influence on neoplastic disease. Spontaneous regression of colorectal cancers is rare and accounts for less than 2% of such cases (1). Spontaneous regression of primary advanced colorectal cancer with no metastatic lesions is exceedingly rare. One such case is reported here.

## Case Report

The patient was an 80-year-old man who had consulted his home doctor for hypertension. At a follow-up examination in

January 2004, the patient complained of lower abdominal pain and tarry stool, and was referred to the Department of Digestive Surgery, Nihon University School of Medicine Itabashi Hospital. A barium enema examination (Figure 1) and colonoscopy disclosed a Borrmann type II tumour in the transverse colon measuring 2.5 cm × 2.5 cm (Figure 2a). Biopsy specimens from the tumour demonstrated moderately differentiated adenocarcinoma. A computed tomographic scan also revealed a right renal tumour and renal hydronephrosis, with no evidence of liver or lymph node metastases. (Figures 3a and b). A urological examination was carried out at the Department of Urology, resulting in a diagnosis of double primary colon and renal cell cancer. The patient subsequently refused surgical treatment and did not visit the hospital again for 6 months, during which time he received neither anticancer treatment nor medication. A preoperative colonoscopy performed in August 2004 resulted in the tumour being reclassified to a IIc lesion, with disappearance of transverse colon cancer (Figure 2b). A biopsy was performed at the location of the earlier lesion and the result was negative for cancer. In September 2004, a right nephrectomy was carried out at the Department of Urology, followed by periodic colonoscopies every four months thereafter to determine his progress. Postoperatively, the patient received no adjuvant chemotherapy or other anticancer treatment. A periodical colonoscopy performed in December 2004 revealed scarring from the lesion, with disappearance of transverse colon cancer (Figure 2c). No further lesions were identified in the following four colonoscopies. On colonoscopy in January 2008, 43 months after the lesion had first disappeared (Figure 2d), there were no signs of any new lesions. Furthermore, in 2010, 64 months after the lesions had first disappeared, the patient was still alive and there were no signs of recurrence.

## Discussion

Spontaneous regression of cancer is very rare, and exceedingly so in the case of advanced colorectal cancer with solid carcinoma. While a review of spontaneous regression between 1987 and 1990 confirmed more than 100

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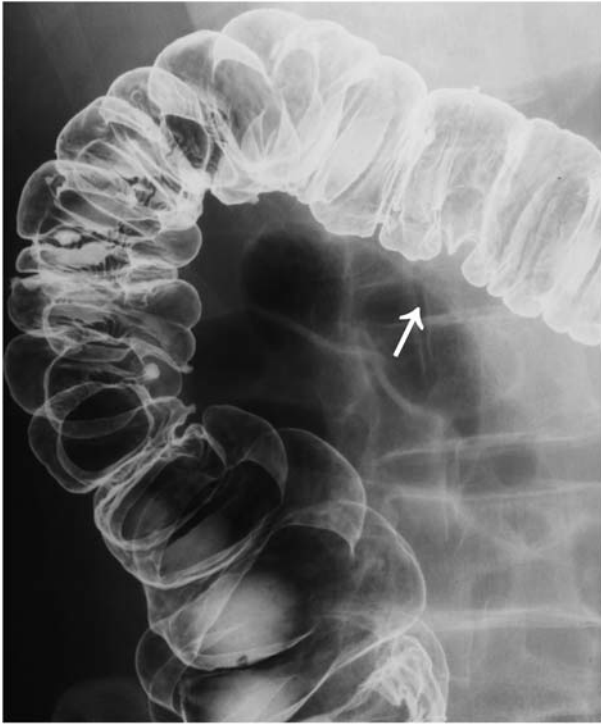


Figure 1. Barium enema examination disclosed Borrmann type II tumour in transverse colon measuring 2.5 cm × 1.5 cm.

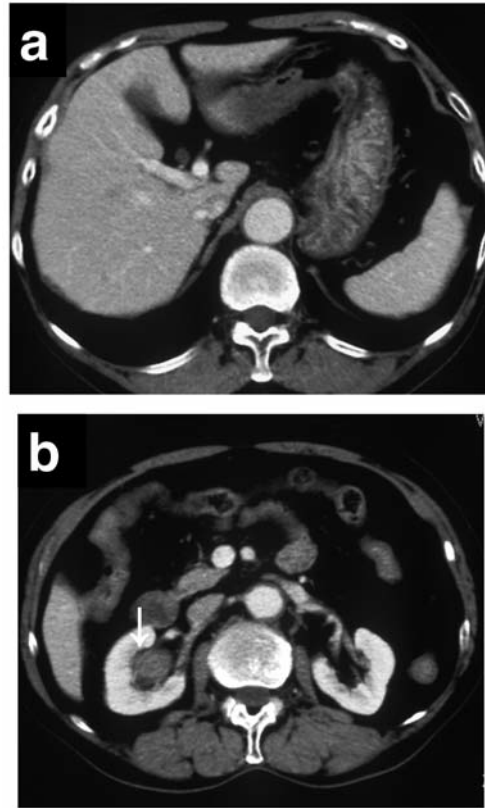


Figure 3. Computed tomography images revealed right renal tumour and renal hydronephrosis, with no sign of liver or lymph node metastases.

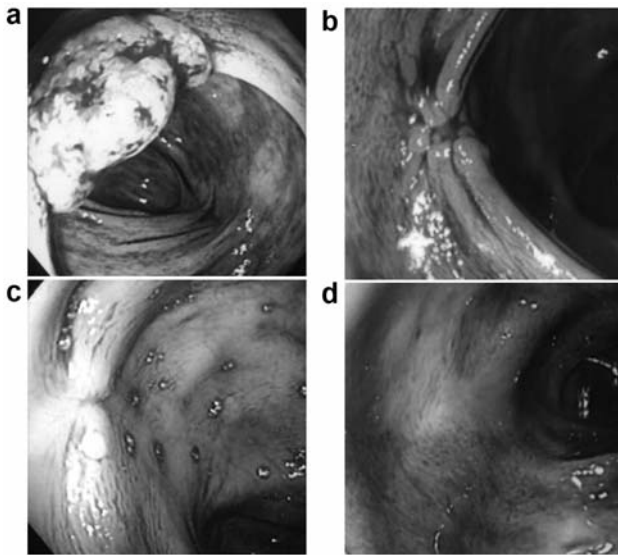


Figure 2. a: In January 2004, colonoscopy disclosed Borrmann type II tumour in transverse colon measuring 2.5 cm × 2.5 cm; b: A colonoscopy performed in August, 2004 resulted in reclassification of Borrmann type II tumour of transverse colon to IIC lesion; c: A colonoscopy performed in December, 2004 revealed that only scarring remained at the site of the earlier Borrmann type II tumour; d: In January 2008, 43 months after colonoscopy revealed disappearance of tumour, no further lesions were identified.

such cases in blood, genitourinary and other miscellaneous cancers, there were only 17 such cases of colorectal cancer (1). A review of spontaneous regression in colorectal cancer cases between 1990 and 2005 confirmed 21 such cases for colorectal cancer, and the primary lesion was confirmed in only 11 of those cases (2). Some recent studies have reported the disappearance of metastatic liver tumour and peritonitis carcinomatosis from rectal cancer. These cases, however, only represent the disappearance of metastases (2-5). In this case, it is likely that the tumour was dislodged. Colonoscopy resulted in the tumour being reclassified to a IIC lesion, and pathological analysis revealed the disappearance of cancer cells. Spontaneous regression of colorectal cancer is rare. One reason for this is that colorectal cancer is almost always treated immediately after it is diagnosed. Another reason is that technological advances now allow removal of early-stage colorectal tumours at the time of endoscopic examination. This patient did not visit the hospital again for 6 months after initial presentation, as he was emotionally upset at the diagnosis of renal cancer reached during preoperative examination, and he consequently received neither anticancer treatment nor medication. It would appear that this particular

set of circumstances provided the possibility for spontaneous disappearance of the cancer.

Although a number of authors have reported spontaneous regression, they did not discuss the possible reasons or mechanisms involved. This is understandable in light of the fact that the scientific literature generally provides little data to explain this process. In this case, it would appear that the tumour was dislodged by some kind of physical stimulation such as peristaltic movement due to a laxative or the effect of some type of medical examination such as barium enema or colonoscopy. However, although a polypoid lesion may disappear through a tumour becoming dislodged due to physical stimulation, this would be difficult with an advanced cancer (6-10).

In contrast, Cole has suggested that immune systems may cause spontaneous regression by forming specific antibodies and immunologically reactive lymphoid cells in response to antigenic tumour cells (11). Immunological research may soon be able to provide a better description of the mechanisms by which tumours develop or are impeded (12). These immunological factors remain to be fully clarified.

In conclusion, this case confirms the possibility of spontaneous regression of advanced colon cancer. Spontaneous regression of colorectal cancer is sporadic, and no precipitating factor has been identified from previous reports or from this case. The accumulation of such cases of spontaneous regression will contribute to the further understanding of this interesting phenomenon and may also lead to new treatment strategies for colorectal cancer.

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