Colonic Metastasis of a Renal Cell Carcinoma. A Rare Cause of Large-Bowel Obstruction. A Case Report

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Citation

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Abstract

Bowel obstruction is a mechanical or functional obstruction of the intestines, preventing the normal transit of the products of digestion. Large bowel obstruction represents a well recognized surgical problem. The most common causes include neoplasm, Crohn's disease, hernias, postsurgical adhesions, etc. Patients usually present with abdominal pain and distension, vomiting and constipation. The diagnosis is usually suspected from the history and physical examination and confirmed on x-ray. In this paper we present the case of a 77-year-old man who was diagnosed with bowel obstruction caused by metastasis of a renal cell carcinoma to the transverse colon.

CASE REPORT

A 77-year-old patient was referred to the surgical department with complaints of constipation. Two months prior to referral, the patient was diagnosed with an excessive diverticular disease which was treated with laparoscopic sigma resection. At that time, a contrast-enhanced CT scan of the abdomen and a colonoscopy performed confirmed the diverticular disease without any other pathology. Eight years before surgery, the patient underwent a left partial nephrectomy for renal cell carcinoma. The post-nephrectomy follow-up at the urologist's was uneventful.

The patient was admitted and medical treatment was initiated. This, however, was not successful, so a colonoscopy was performed to rule out a stenosis of the anastomosis. An exophytic ulcerated tumor in the proximal transverse colon was evident on colonoscopy and biopsies were taken. A histological analysis of the biopsies showed characteristics of renal cell carcinoma. Laparotomy and extended right colectomy was performed. The final histological analysis confirmed a metastasis of renal cell carcinoma. Intraoperative renal biopsies were free of local tumor recurrence.

COMMENTS

Colonic obstruction is a well-recognized surgical problem. Mechanical obstructions are common in elderly patients. Although dietary changes could result in bowel obstruction, a colonic neoplasm must be ruled out. Other common causes of constipation include colonic volvulus, hernias, diverticular disease with stenosis, and inflammatory bowel diseases with strictures[1]. Postoperative adhesions, however, now account for the vast majority of intestinal obstruction. Metastasis to the colon is an extremely rare cause of colonic obstruction.

The clinical presentation depends on the rate at which the obstruction develops. Acute obstructions usually follow adhesions, leading to a full-blown ileus picture within hours to days. Obstruction on the basis of neoplasm and inflammatory bowel disease, on the other hand, develops slowly over weeks, months or years, thus giving the patients a chance to adapt to the bowel changes. Usually patients report progressive thinning of stool. The full-blown clinical picture presents when more than 75% of the colonic lumen is occluded. In the case above, the symptoms slowly developed over a period of 2 months.

The diagnosis is suspected from a well-structured history and supported by findings from physical examination. Abdominal distention and tenderness with hyperactive bowel sounds are characteristic of mechanical obstruction[2]. The diagnosis is further strengthened by imaging modalities like ultrasound[3] and x-ray. Abdominal ultrasound shows dilated bowels with increased peristaltic activity. Plain films of the abdomen in various positions demonstrate dilated intestines and/or air-fluid levels[4]. Laboratory examinations are directed at evaluating dehydration and electrolyte imbalance that occurs with vomiting in ileus. This warrants an immediate

but gradual correction. The patient in this case had a normal abdominal radiograph. The laboratory examinations were within normal limits.

Most important, however, is the etiology of the underlying pathology. Initially, a roentgenograph with water-soluble radiopaque contrast e.g. gastrografin is carried out. This also has a therapeutic effect by acting as a laxative. Although CT scanning is not generally used in patients with large-bowel obstruction, it remains valuable in cases where malignancy is suspected[5]. Sigmoidoscopy and colonoscopy are generally recommended to work up the differential diagnosis and for biopsy if needed.

Although bowel obstruction is a surgical problem, medical treatment has proved to be successful. This includes resuscitation and correction of fluid and electrolyte imbalance. A nasogastric tube is temporally placed for decompression, thus preventing vomiting and aspiration. A new trend is the implementation of stents in the management of acute large-bowel obstruction, especially in the anorectal region[6]. Most of the patients, however, require surgical intervention[7].

In this case report an abdominal plain film series was performed after gastrografin ingestion. This showed a delayed passage of gastrografin. A stenosis of the anastomosis was thought to be the cause of constipation (status post sigma resection with decendorectostomy), so a colonoscopy was performed. An exophytic ulcerating tumor was visualized and biopsies were taken. An extended right hemicolectomy with ileotransversostomy was performed. The post-surgical course was uneventful and the patient was discharged 12 day post surgery.

Since biopsies of the kidneys taken during surgery did not contain any malignant cells, we came to the conclusion that the obstruction was due to a colonic metastasis of the renal cell carcinoma, which was resected more than 7 years back.

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