

Malignant Colonic Stricture with Cecal Perforation: A Case Report and A Review of Literature

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A 79-year-old Saudi female with cecal perforation as a result of colonic malignant stricture is presented. This was treated by emergency subtotal colectomy and ileo-colic anastomosis with satisfactory result. This case reinforces the fact that patients above the age of forty with gastrointestinal symptoms require full work-up to rule out malignancy. Also it shows that abdominal ultrasound alone is of limited diagnostic value in detecting colonic stricture. Thirdly, large bowel obstruction, especially, when total should be treated urgently to avoid cecal perforation.

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Cecal perforation following large bowel obstruction is a well-known entity although not very common. We report here a case of cecal perforation, following left colon carcinoma which was probably missed earlier. This patient was treated successfully by emergency subtotal colectomy. Other various options of treatment are discussed.

THE CASE

A 79-year-old Saudi female was admitted with a 5-day history of nausea, constipation, abdominal pain and distention. The review of other systems were essentially non-contributory.

Past medical history revealed that she was admitted two months previously with similar complaints diagnosed at that time as gastroenteritis. During that admission the examination of the stool showed a trace of occult blood but negative for ova and parasites. Also, the stool culture was negative. She was treated with and discharged on Ciprofloxacin and Metronidazole, after the ultrasonography of the abdomen had been interpreted as normal.

During this second admission, she was found to be ill-looking, but not toxic. There was abdominal distention and mild tenderness on deep palpation. Her temperature was 37.4°C and WBC was 6.0x10⁹/L. Plain X-ray of the abdomen showed distended colon with no evidence of gas in the rectum. Other laboratory studies were unremarkable.

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Emergency barium enema performed on 01/06/1420H (10/09/1999G) showed an obstruction in the left colon. Also, emergency ultrasonography of the abdomen and pelvis showed only evidence of what could be interpreted as nodules in the left lobe of the liver.

On 02/06/1420H (11/09/1999G) the patient had an abdominal exploration through a midline incision. A malignant stricture was seen at the distal end of the left colon and about 7 to 9 cm tear in the anterior teania coli aspect of the cecum. Subtotal colectomy and ileo-colic anastomosis was performed. The liver was completely normal by palpation.

Post-operative course was uneventful and she was discharged on 14/06/1420H (23/09/1999G) in satisfactory condition 2 weeks after admission.

DISCUSSION

The fact that this patient was seen two months previously and was not diagnosed emphasizes the point that elderly patients with gastrointestinal problems, especially, when there are traces of occult blood in the stool like this patient require a full work-up for colonic malignancy¹.

Various conditions causing large bowel obstruction with associated cecal perforation have been reported. A case of cecal perforation secondary to Ogilvie's syndrome has been reported². A case of non-steroidal anti-inflammatory drug (NSAID) induced colonic stricture leading to large bowel obstruction and secondary cecal perforation has also been reported³. Yamamoto et al⁴ have also reported a case of neonatal cecal perforation secondary to rectosigmoid Hirschsprung's disease⁴. Neutropenic enterocolitis⁵ and Crohn's colitis⁶ have also been reported to be associated with cecal perforation.

The diameter of the cecum in which perforation is imminent has been estimated to be between 9 cm and 16 cm^{7,8}. This in essence means each case has to be individualised. It is known that intestinal obstruction promotes gut translocation of bacteria⁹ and this can have a severe clinical consequence especially when it is the large bowel. When there is perforation of the large bowel like the cecum, this triggers an overwhelming host reaction¹⁰ with leukocytopenia, cytokine release, dehydration, hypoperfusion and death.

In dealing with an emergency left colon obstruction many authors now favour some form of primary anastomosis as opposed to treatment involving creating an initial stoma. On-table lavage with primary anastomosis has been recommended as a method of dealing with an emergency left colon obstruction¹¹. Many others have recommended subtotal or extended right hemicolectomy for emergency left colon or distal transverse colon obstruction. This is advisable in cecal perforation complicating large bowel obstruction as in this case, and in those patients who have a high risk of a metachronous lesion developing¹². This is also advisable if the proximal colon cannot be evaluated before operation by colonoscopy or barium enema¹³. Other indications for subtotal colectomy in the treatment of carcinoma of the colon listed by Brief et al¹³ include acute and subacute left colon obstruction, polyps associated with primary

tumour, synchronous carcinoma, previous transverse colostomy for obstruction, associated severe sigmoid diverticular disease, age less than 50 years with a positive family history of carcinoma and adherence of the sigmoid loop to a cecal tumour. Arnaud et al¹⁴ include as indications for subtotal or total colectomy in obstructed colonic carcinoma, massively distended colon of dubious viability and likely to contain ischemic lesions. The ileocolonic anastomosis is a much safer anastomosis than colo-colic anastomosis and the operative mortality rate of this procedure is believed to be as low as with elective surgery¹⁴.

CONCLUSION

This case illustrates three important points. Any patient around the age of forty and above with gastrointestinal problems deserves full work-up to eliminate gastrointestinal malignancy. Apparently this was missed 2 months before this present admission. Also, abdominal ultrasonography is of limited value in detecting intraluminal colonic neoplasms. Thirdly, large bowel obstruction especially when total should be treated with urgency to avoid cecal perforation. In such cases subtotal colectomy and ileo-colic anastomosis is the preferred surgical treatment.

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