



Contents lists available at ScienceDirect

International Journal of Surgery Case Reports

journal homepage: www.casereports.com

Colon cancer presented with sigmoid volvulus: A case report

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ARTICLE INFO

Article history:

Received 7 July 2015

Received in revised form 31 August 2015

Accepted 9 October 2015

Available online 24 October 2015

Keywords:

Sigmoid volvulus

Sigmoid cancer

Computerized tomography

ABSTRACT

INTRODUCTION: Sigmoid volvulus is the most prevalent type of colonic volvulus. Colon cancer is seen less where sigmoid volvulus is common, so it is rare to see that colon cancer is synchronous with sigmoid volvulus.

PRESENTATION OF CASE: We would like to present a case of sigmoid volvulus caused by colon cancer in a male patient aged 80 who was referred to the hospital with toxic shock presentation.

DISCUSSION: Sigmoid cancer can be presented as sigmoid volvulus to the emergency department. In intestinal obstruction early diagnosis is of crucial importance. Computerized tomography is a diagnosis tool that should be preferred both in the diagnosis of obstruction and in detecting its cause, localisation, degree and complications.

CONCLUSION: When surgery is performed due to the urgent colonic obstruction in colonic volvulus diagnosed patients, a colon tumour should be considered in the same column loops or in the distal colon. We believe that CT is the method that should be preferred in large-bowel obstruction suspected patients.

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1. Introduction

Approximately 60% of mechanical large-bowel obstructions (LBOs) are caused by malignancies, 20% by diverticular disease, and 5% are the result of colonic volvulus [1–3]. Sigmoid volvulus (SV) is known to be encircling of sigmoid colon around its own base [4]. SV was defined first by Rokitsky in 1841 [5]. The primary procedure in treating SV is early nonsurgical detorsion that is followed by elective surgery in uncomplicated patients, but urgent surgical treatment is suggested for patients with bowel gangrene, perforation, or peritonitis as well as in other problematic diagnoses, failed nonsurgical detorsion, and early recurrence [6]. In obstructive colon tumours the primary procedure is urgent surgical treatment. In this article we aim to present a case of SV led by colon cancer.

2. Case presentation

An old man at the age of 80 with abdominal pain, distension and obstipation lasting for four days was admitted. It was also realised that the patient had a constipation for a long time and that there had been no stool discharge for 4 days. In his physical examination,

it was noticed that there were abdominal distension, abdominal tenderness, rebound, septic appearance. Abdominal X-ray demonstrated the existence of dilated bowel segments with air-fluid levels (Fig. 1).

In abdominal CT sigmoid colon there were 10 × 5 cm ulcerovegetant tumour and mass air-fluid levels in the proximal bowel loops (Fig. 2). The patient was diagnosed as ileus caused by sigmoid cancer. Preoperative laboratory values including liver function (SGOT and SGPT) were normal. Total and direct bilirubin, coagulation function, blood urea nitrogen, white blood cell, serum sodium and blood glucose levels were high.

The patient with anaemia, thrombocytopenia and metabolic acidosis was operated urgently followed by fluid resuscitation. In the exploration, torsion in the sigmoid colon and distension in the entire colon were observed, and sigmoid colon nourishment was normal but widely echymotic areas were noticed in transverse colon. When the sigmoid colon was detorsioned, sigmoid colon was seen to be elongated (afferent loop was about 30 cm and efferent loop was about 30 cm), meson base was narrow (4–5 cm) and an overflowing tumoral mass of anti mesenteric 8 × 5 cm serosa was found in the middle of sigmoid colon (Fig. 3). The patient underwent total colectomy and Hartmann procedure. The intubated patient was taken to anaesthesia intensive care. He died developing DIC as a result of toxic shock following postoperative day 4.

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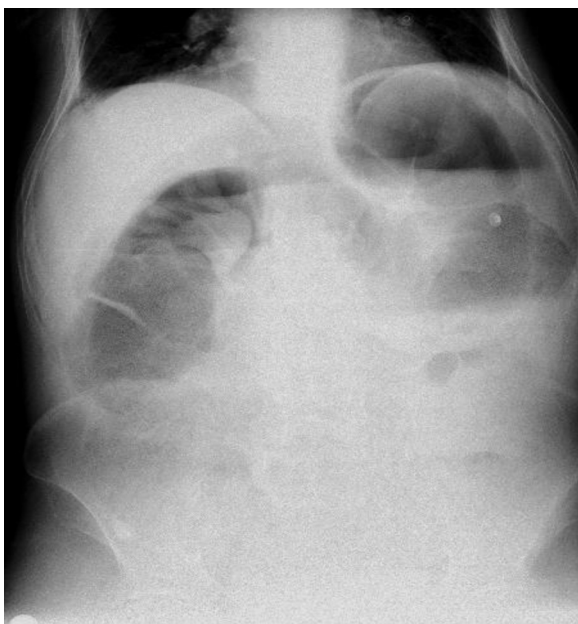


Fig. 1. Radiograph shows colonic dilatation.

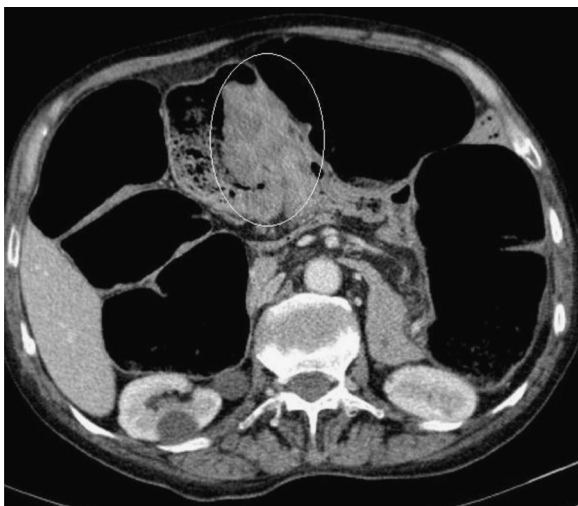


Fig. 2. Axial contrast-enhanced CT scan shows an eccentric large mass with luminal narrowing (in circle).

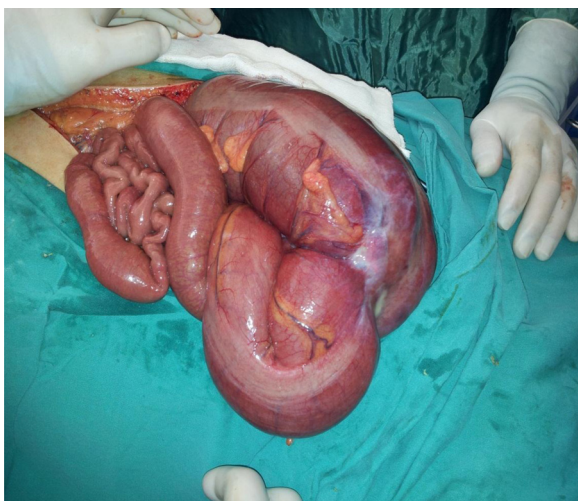


Fig. 3. Shows intraoperative view of sigmoid colon cancer after detorsion of volvulus.

3. Discussion

SV is the most common form of colonic volvulus [7,8]. SV incidence shows regional differences [7,9–11]. There are significant regional differences in the frequency of SV in our country [12]. It is believed that chronic faecal overloading leads to elongation and dilatation of the sigmoid colon [13]. High-fiber diet causes elongation in sigmoid colon. Sigmoid elongation is a proven etiological cause for SV [7]. Colon cancer is seen less where SV is common [10,11], so it is rare for colon cancer to be synchronous with SV. It has been shown that colon cancer is less prevalent in the east of Turkey compared to the west, but SV is more prevalent [12,14].

In the literature, some authors have reported that the carcinoma may be a rare predisposing factor for SV. Few cases suggesting sigmoid cancer that leads to SV are reported. In most reported cases, unlike that in our study, there is a colon volvulus in a colon segment in the proximal of segment harbouring cancer. Different authors have reported the association of tumour and cecal volvulus in left column [15], tumour and ascending colon volvulus in splenic flexura [16] tumour and ascending colon volvulus in the transverse colon [17], rectosigmoid tumour and cecal volvulus [18] and rectal tumour with sigmoid volvulus [19]. Also Lapin et al. [20] have reported an association of T colon volvulus with submucosal hamartoma in the transverse colon [20], and lipoma with SV [21] in sigmoid colon.

Late diagnosis in intestinal obstruction could cause septic shock status resulting in high mortality and morbidity. In the diagnosis of large-bowel obstruction (LBO) the first method is ambulant direct abdominal radiograph (DAR). DAR can diagnose obstruction 20–90% with sensitivity [22–24]. In order to decide whether to begin treatment with surgery or a non-surgical method, we need to know about localisation, cause, degree of obstruction and whether such complications as strangulation, perforation due to the obstruction developed or not as well as the diagnosis of obstruction. After DAR, the most preferred radiological analysis is Computerised Tomograph (CT). In cases which mechanic obstruction is thought standard CT is successful not only in diagnosing LBO, but also obstruction level and its cause, and in showing the complications such as ischemia and strangulation [25]. Since almost 60% of LBOs develop because of colon tumours, the first preferred method should be CT intravenous contrast for LBO suspected patients referring to emergency service.

In our literature survey two reported simultaneous cases of SV and sigmoid colon cancer were found [26,27]. This presented case is the third one in which Sigmoid colon cancer is presented with SV. This study suggests that in this case the cause of septic shock status due to late diagnosis, which was shown to be LBO with CT screening, was the tumour in colon and that the obstruction was complete.

4. Conclusion

In LBOs early diagnosis and treatment is crucial but diagnosis is not enough in treatment method. The cause, degree, localisation and, degree, localisation and complications of obstruction should be known. Therefore, we believe that CT is the method that should be preferred in LBO suspected patients.

Having evaluated this study and other cases in literature, when surgery is performed due to the urgent colonic obstruction in colonic volvulus diagnosed patients, a colon tumour should be considered in the same column loops or in the distal colon, and in cases where colon cancer is detected first, concurrent colonic volvulus must be thought and the exploration should be made accordingly.

Conflict of interest

All authors declare that they have no conflict of interest and also the patient described in the case report has given their informed consent for the case report to be published.

Funding

No funding sources.

Ethical approval

As this study is a case report, we did not have ethics committee approval as a policy of our institution.

Consent

The patient presented in this case report gave informed consent about publication.

Author contribution

Abbas Aras: study design, data collection, manuscript writing.
Remzi kızıltan: data collection and analysis.
Abdussamet Batur: data analysis and radiologic investigations.
Sebahattin Çelik: data analysis and collection.
Özkan Yılmaz: data collection.

Mehmet Çetin Kotan: data analysis and final manuscript reduction.

Guarantor

Abbas Aras is the guarantor of this case report study.

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