[症例報告]Mesenteric Hematoma of the Sigmoid Colon : A Case Report and A Review of the Literature in Japan

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Mesenteric Hematoma of the Sigmoid Colon : A Case Report and A Review of the Literature in Japan

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Abstract

A case, 64-year-old man, of mesenteric hematoma of the sigmoid colon is presented herein. The patient was admitted to the University Hospital suffering from a large abdominal mass in the left lower quadrant and acute obstructive cholecystitis. About two months prior to this admission, the patient had a episode of abominal pain with vomiting and been hospitalized for a week with a diagnosis of intestinal obstruction. The operation was carried out with a preoperative diagnosis of cystic mesenteric lesion of the sigmoid colon and acute obstructive cholecystitis. A large hematoma, 13×7×5 cm. in size, was located in the mesentery of the sigmoid colon. The hematoma was removed resecting the involved segment of the sigmoid colon. Cholecystectomy was also performed.

The present case is the 13th case of mesenteric hematoma and the first in the sigmoid colon reported in Japan.

Introduction

Mesenteric hematoma of the intestine is extremely rare and is seldom encountered during the career of the average surgeon. Up to November, 1984, only twelve cases have been reported in the literature in Japan[1-12]. We recently experienced a case of large mesenteric hematoma of the sigmoid colon which was successfully removed.

Case Report

A 64-year-old man was admitted to the University Hospital in June, 1984 for evaluation of a large abdominal mass and acute cholecystitis. In April, the patient had an attack of abdominal pain, abdominal fullness and vomiting, and was hospitalized for a week with a diagnosis of intestinal obstruction. The symptom was improved under the conservative

treatment. In May, he noticed a large abdominal mass in the left lower quadrant and presented with acute cholecystitis. No history of abdominal trauma and anticoagulant therapy was significant.

On admission, he appeared afebrile. The abdomen was slightly distended. There was a mild tenderness in the right upper quadrant. A large, firm and round mass was found in the left lower quadrant of the abdomen with lack of mobility.

Laboratory examination :

Blood cell count and liver function tests were within normal limit. Fibrinogen degradation products (FDP) was 9 μg/dl (normal 2-8 μg/dl). Bleeding time was 4 minutes and coagulation time, 8 minutes. Prothrombin time was 13.5 seconds (control 12.7 seconds), partial thromboplastin time 32.7 seconds (control 31.5 seconds), thrombo test 92% (normal 70-130%) and fibrinogen 210 mg/dl (normal 170-410 mg/dl). He revealed no evidence of hemorrhagic diathesis. His blood pressure was normal during hospitalization.

Ultrasonography (US) demonstrated an enlarged gallbladder with an impacted gallstone in the cystic duct suggesting acute obstructive cholecystitis. The ultrasonographic appearance of the mass in the left lower qaudrant was cystic with internal low level echoes and septations. Computed tomography (CT) showed a round, homogeneous mass and barium enema revealed medial displacement of the sigmoid colon compressed by the mass (Fig. 1). The patient was diagnosed as having mesenteric cystic lesion and acute cholecystitis, however a tentative diagnosis of mesenteric hematoma was not made.

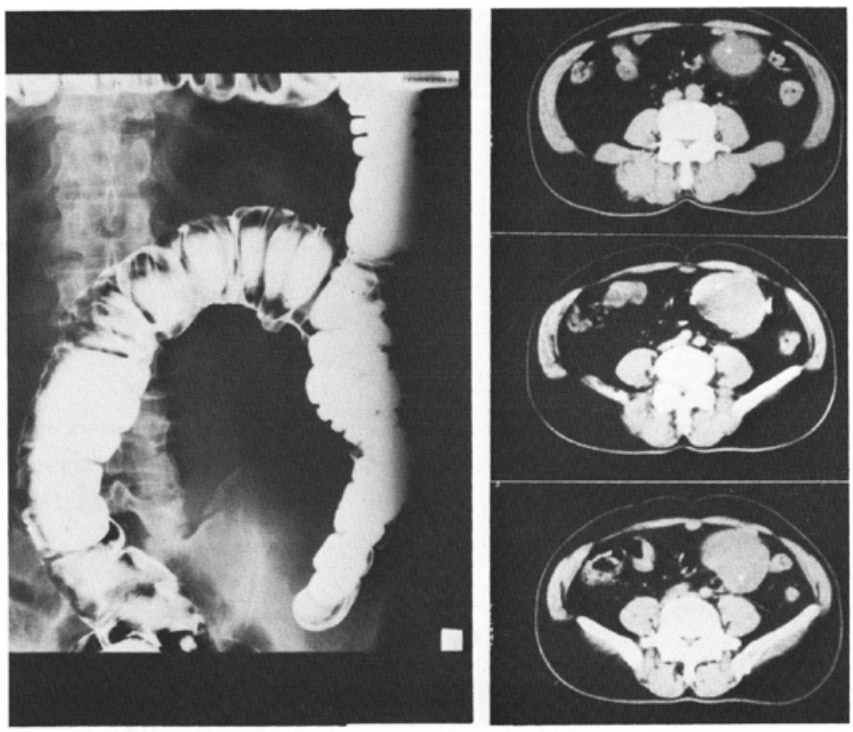

Fig. 1 Photograph of barium enema (left) showing displacement of the sigmoid colon and computed tomographs (right) demonstrating a homogeneous mass in the abdominal cavity.

Operative procedures :

At surgery, a large encapsulated mass was found in the mesentery of the sigmoid colon, and was adherent to the retroperitoneal space. The hematoma was successfully removed resecting the involved segment of the sigmoid colon. Cholecystectomy was simultaneously performed.

Macroscopic findings :

The cystic mass of the sigmoid mesentery was 13×7×5 cm. in size and filled with clotted blood and bloody fluid. The capsule was thin, 3 to 5 mm. in thickness. No definite source of bleeding such as aneurysms, varices or rupture of the vessels was identified. The mucosa of the sigmoid colon was normal in appearance without any comminucation between the hematoma and the sigmoid colon (Fig. 2).

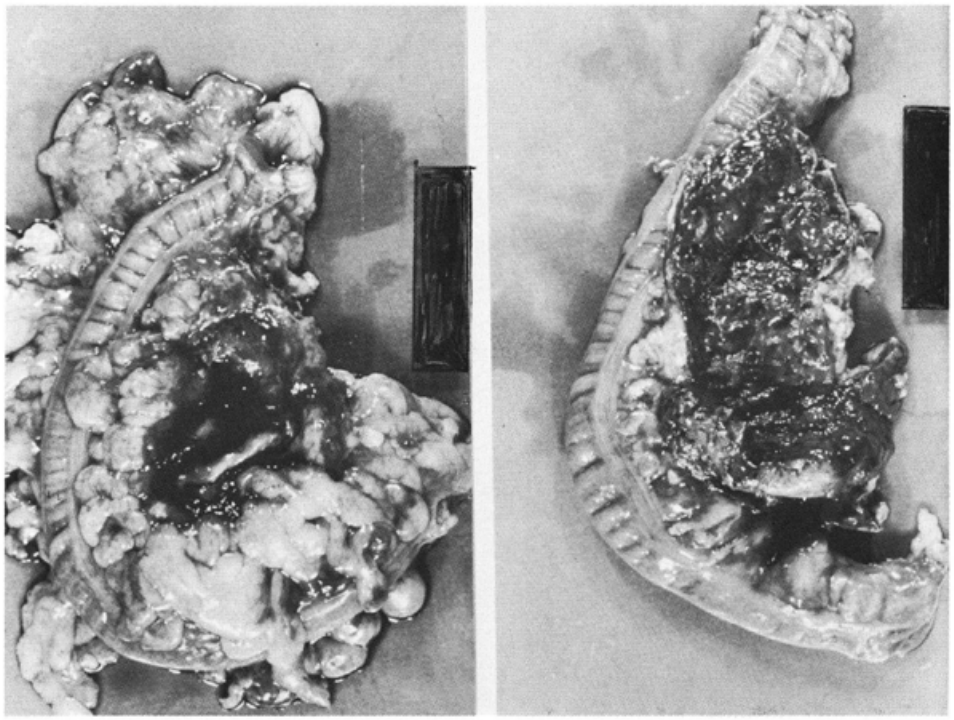

Fig. 2 Macroscopic features of the external surface of the hematoma (left), and the opened hematoma after evaculation of clotted blood (right).

The gallbladder was filled with dark-green and viscid bile. The cystic duct was occluded by an impacted cholesterol stone which was round and 1.5 cm. in diameter. The wall was moderately thickened and patchily necrotic.

Microscopic findings :

The capsule of hematoma was composed of thin connective tissue. The inner surface of

the capsule was covered with fibrin substances (Fig. 3). While the outer layer of the capsule comprised granulomatous tissue and was histologically identical to lipoid granuloma of the breast (Fig. 4). The findings of acute necrotizing cholecystitis of the gallbladder was significant.

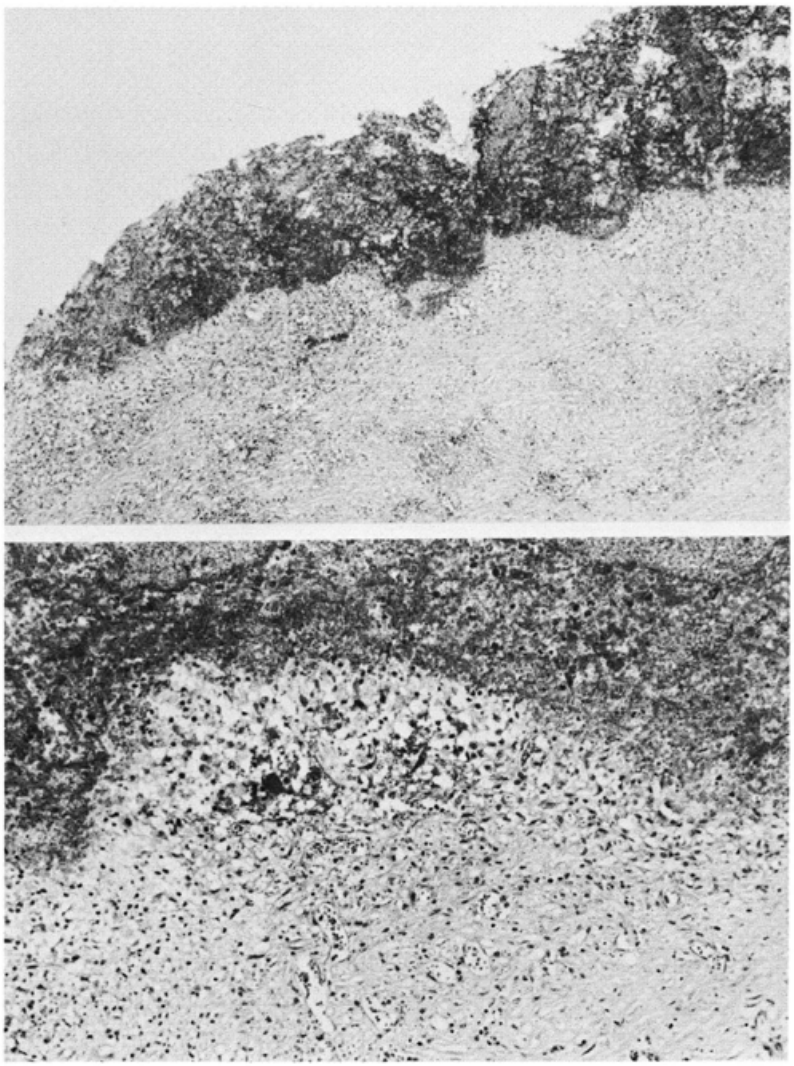

Fig. 3 Microscopic photographs of the inner surface of the hematoma capsule revealing fibrous tissue covered with fibrin material (upper, HE ×40; bottom, HE ×100).

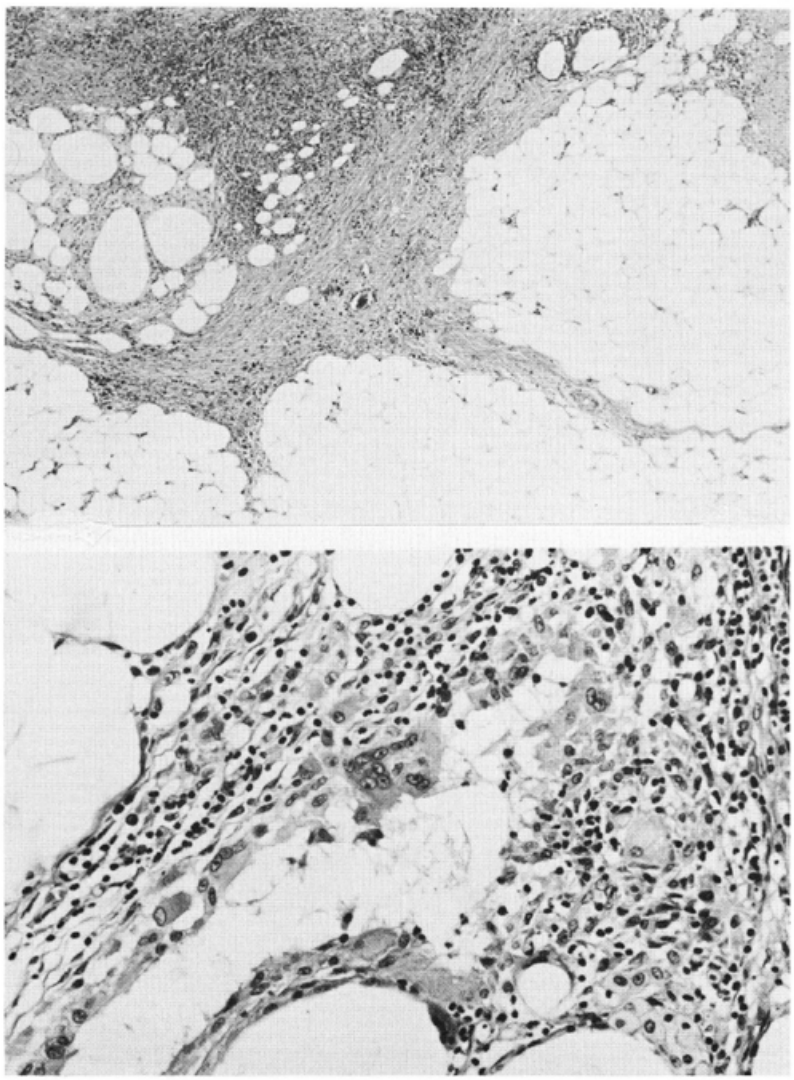

Fig. 4 Microscopic photographs of the outer tissue of the hematoma capsule showing lipoid granulomatous lesion (upper, HE ×40; bottom, HE ×200).

Discussion

Mesenteric hematoma is an uncommon lesion and seldom appears as isolated entities. It is usually associated with hemorrhage or injury of the adjacent bowel loop or solid viscera. Up to November 1984, only twelve cases have been gleaned from the literature in Japan in our review[1-12] (Table I).

The cause of mesenteric hematoma is iatrogenic, traumatic or idiopathic. In over half of the cases reported in Japan, the cause of the lesion was idiopathic and the remaining, of traumatic or vascular cause. It was documented that about 5% of patients on anticoagulant therapy had gastrointestinal bleeding, often resulting hematoma in the subserosal layer and

No.	Authors	Case	Cause	Location	Treatment
1	Ishiyama (1928) [1]	52 M	idiopathic	transverse colon	resection
2	Matsuno (1937) [2]	23 F	idiopathic	small intestine	resection
3	Mineyama (1947) [3]	60 F	idiopathic	jejunum	laparotomy
4	Takeichi (1950) [4]	54 M	traumatic	not described	not described
5	Seki (1952) [5]	6 F	idiopathic	ileum	resection
6	Sugimoto (1955) [6]	11 M	traumatic	small intestine	aspiration
7	Suzuki (1970) [7]	38 M	traumatic	ileum	evacuation
8	Okazaki (1978) [8]	59 M	idiopathic	ileum	evacuation
9	Murata (1979) [9]	52 M	aneurysm	ascending colon	resection
10	Takimoto (1980) [10]	29 F	idiopathic	jejunum	evacuation
11	Tanabe (1981) [11]	62 M	traumatic	jejunum	evacuation
12	Izukura (1984) [12]	37 F	Osler's dis.	transverse colon	evacuation
13	Iwata (1985)	64 M	idiopathic	sigmoid colon	resection

Table I Summary of Mesenteric Hematoma reported in Japan

mesentery[13]. Other less common causes of the lesions are due to accidental vascular injury during adbominal operations or angiography. These hematomata or hemorrhages mostly resolve spontaneously and clinically are not significant[14].

With advent of traffics, traumatic causes of mesenteric hematoma have become more important. Trauma to the abdomen may be penetrating or nonpenetrating. Reviewing the subject of nonpenetrating abdominal injury, small bowel injuries were found in 5 to 10% of patients with blund abdominal trauma. These injuries included contusion, hematoma, laceration and avulsion of the intestine[15-16]. In our case, no any history of abdominal trauma was encountered. However, the remote episode of abdominal trauma can not be neglected, since an association with the remote episode of trauma is unlikely to be made in some reported patients with post-traumatic colon stenosis years after injuries[17].

The clinical manifestation depends upon whether the injury or hemorrhage is localized to the mesentery or associated with other organ injury. Bleeding from the small vessels may lead to a hematoma in the mesentery alone or minimum extension into the bowel wall. Under these situations, the bowel usually remains viable. On the other hand, hemorrhage from the large vessels pursues a more acute course and the patients have severe blood loss and shock. In such cases, these are usually associated with injuries to other organs. Hemorrhage from the small vessels is slow and the patients are seen days or weeks after injuries with abdominal distension and mass formation[18]. Most of the cases reported in Japan presented with severe abdominal pain as the onset of symptoms. Days after the onset, the patients noticed abdominal distension or mass formation with more or less anemia. Indeed, our patient complained initially of abdominal pain, and then noticed an abdominal mass one month later. One of them in the literature[6] was diagnosed to have intestinal obstruction preoperatively

similar to our case. The patient might have partial or complete intestinal obstruction due to the extrinsic pressure by the mesenteric hematoma or due to associated intramural hematoma[19].

With regard to diagnosis of mesenteric hematoma, contrast studies of the intestine may reveal displacement of bowel loop or intestinal obstruction[16] as shown in our case. These are usually nonspecific findings, but when correlated with the history of abdominal trauma, they may suggest the mesnteric hematoma. Angiographic examination in the fresh hematoma shows the bleeding site and demonstrates mass effects caused by mesenteric and bowel injuries[21-22]. It may also be useful for evaluation of cause of hematoma such as vascular diseases.

CT and US are the most acceptable non-invasive investigation in diagnosis. Such examinations reveal the localization and nature of the lesions. The US, in particular, is the most suitable method[23]. The ultrasonographic appearance of a hematoma depends upon the time interval between the onset of bleeding and the examination. In the fresh hematoma, a cystic lesion due to unclotted blood or homogeneously clotted blood is characteristic usually without internal echoes. In old hematoma with evidence of lysis and fragmentation of clotted blood, internal echoes and echo septations are found as seen in our case.

The management of a mesenteric hematoma depends on the patient's clinical presentation. Surgery is indicated if the patient shows signs of severe blood loss or secondary complications such as intestinal obstruction or ischemia. Two surgical procedures are documented ; the one is evacuation of hematoma with ligation of bleeding vessels and the other is removal of hematoma resecting the involved segment of the intestine. Our patient underwent the latter operation, nevertheless, we believe that the former procedure is superior to the latter because intestinal resection for benign disease of the mesentery is not reasonable. Thus, if the diagnosis can be definitely established, even when the bowel is obstructed by hematoma, evacuation of hematoma may be the recommendable surgical procedure.

If the patient's condition is stable and the diagnosis is definite, the patient should be managed conservatively.

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