Case Report

Cecal Diverticulitis

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INTRODUCTION

Cecal diverticulitis is a relatively rare entity presenting protean clinical manifestations[1]. Since first described by Portier[2] in 1912, Cecal diverticulitis has become increasingly recognized. Greaney[3] reported an incidence of Cecal diverticulitis of one in every 1000 emergency celiotomies for acute abdominal conditions. A number of radiological, clinical and pathological studies indicate that Cecal diverticulosis is found in 1-5% of all patients with diverticular disease[4]. It appears that although Cecal diverticula among whites is rare, it is much more common in those of Asian ancestry[5]. The average age of the patients is 40 years and males comprise 60% of all patients[4]. The etiology of Cecal diverticulitis remains unclear[6]. Cecal diverticula are classified as true or false. True Cecal diverticula are usually solitary, involved all layers of the colon and are thought to be congenital[7]. In contrast, false Cecal diverticula are multiple, most often associated in continuity with left-sided diverticulosis, do not contain muscle and are typical, acquired, pulsion diverticula[8].

In studies of Cecal diverticulitis, it is often difficult to document the true pathological appearance of a pre-existing diverticulum, possibly because of the inflammatory response[9], and controversy persists concerning the origins of Cecal diverticula[10].

In the present case report, we demonstrate how difficult it is to diagnose Cecal diverticulitis. The management lines will also be discussed.

CASE REPORT

A 58-year-old man presented with a two-week history of right iliac pain. He reported having this pain occasionally, which was accompanied by recurrent fever, for the last one year. The pain suddenly increased in severity and became intolerable. There was no history of vomiting. His bowel motion was regular. He gave a history of loss of weight (5 kg) in the last six months and a loss of appetite. He had a previous duodenal ulcer which was treated medically. In addition, he suffered a myocardial infraction five years ago.

Physical examination revealed an ill-looking patient who was neither pale nor jaundiced but pyrexial with a temperature of 37.9 ˚C and pulse of 85/m and BP of 130/90 mmHg. There was guarding in the right iliac fossa and marked tenderness. Rectal examination was unremarkable. Routine hematological investigation revealed leukocytosis of 14,000. Liver function tests, blood sugar, electrolytes, amylase and urine analyses were all normal.

A provisional diagnosis of acute appendicitis was made and he was admitted for observation and kept nil by mouth. The next day he did not improve and the pain was more in the right iliac fossa. It was not a typical picture of acute appendicitis because of the long history, no associated vomiting and the loss of weight. The patient underwent an exploratory laparotomy that revealed a very thick-walled inflamed caecum with a mass involving the lateral wall and the appendix. There was no free pus and the rest of the bowel was normal. A right hemicolectomy was performed because carcinoma could not be confidently excluded. Postoperative recovery was uneventful. Histopathology examination of the resected specimen showed a very edematous mucosa and one very inflamed diverticulum extending through the wall as well as some smaller non-inflamed diverticulae. Sections confirm the presence of Cecal diverticula, one of which showed severe acute inflammation.

DISCUSSION

The Cecal diverticulum is usually asymptomatic and manifests itself only by inflammatory or hemorrhagic complications[11]. Inflammatory complications are the most frequent, caused mainly by obstruction of the diverticular neck. Most patients with Cecal diverticulitis present with acute

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right lower quadrant abdominal pain indistinguishable from that in acute appendicitis [6,8,9]. As Cutajar[12] explains, there are three features that may suggest diagnosis:

1. Relative long histories of increasing abdominal pain from a few hours to several days
2. Relative lack of toxicity despite the duration of symptoms
3. Infrequency of vomiting

Almost all these features were present in our patient. The differential diagnosis is extensive and includes appendicitis, malignant lesion of the right colon, solitary Cecal ulcer, Crohn's disease, tuberculosis, amebiasis, carcinoid, actinomycosis, tubo-ovarian disease, cholecystitis, and foreign body with perforation[13].

The diagnosis of Cecal diverticulitis is difficult to make preoperatively due to its rarity and similar presentation to acute appendicitis. Laboratory studies are not particularly helpful in the diagnosis of Cecal diverticulitis because most patients with right lower quadrant pain present with a moderate leukocytosis[4]. Wagner and Zollinger[14] emphasized that previous attacks, long duration of symptoms, previous appendectomy, fecalith shadow on roentgenogram, or a tender mass may suggest a diagnosis of Cecal diverticulitis, and they advised barium enema studies if the patient's condition permitts. Computed Tomography is useful in the early diagnosis of Cecal diverticulitis[15]. While clearly not indicated in all patients who present with acute right lower quadrant pain, CT may be helpful in the evaluation of patients with symptoms atypical of acute appendicitis or for those who have undergone an appendectomy[15]. Definitive management of Cecal diverticulitis has varied widely.

Treatment has ranged from non-operative to appendectomy and antibiotics, to right hemicolectomy. When the diagnosis is made before the operation, some authors have advocated non-operative management with antibiotic therapy[16]. Operative treatment of diagnosed Cecal diverticulitis is somewhat controversial. Leaving the diverticulum in situ followed by postoperative antibiotics has been successfully attempted by some investigators[12,16]. Harada, et al.,[5] recommended also performing an appendectomy to eliminate the appendix as a future source of confusion. Most physicians agree that a limited procedure should be applied in patients where the diagnosis is obvious. When the pathology is in question or if the mass should compromise the ileocecal valve or threaten the blood supply to the colon, a right hemicolectomy is the procedure of choice[4]. In view of the reduced mortality and minimal morbidity in recent series, right hemicolectomy has been found to be not only safe and effective, but is now the procedure of choice for cecal diverticulitis[13].

While we believe that the treatment of cecal diverticulitis should be individualized, appropriate procedures and definitive treatments should be done to avoid any complication that may happen later on.

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REFERENCES

1. Balthazar EJ, Megibow AJ, Gordon RB, Hulnick D. Cecal Diverticulitis: Evaluation with CT. Radiology 1987; 162:79-81.
2. Portier F. Diverticulite et appendicite. Bull Mem Soc Anat Paris 1912; 37:29-31.
3. Greaney EM. Acute diverticulitis of the Cecum. Am J Surg 1957; 94:270-279.
4. Graham SM, Ballantyne GH. Cecal Diverticulitis: A review of the American experience. Dis Col and Rect 1987; 30(10):821-827.
5. Harada RN, Whelan TJ. Surgical Management of Cecal Diverticulitis. Amer J of Surg 1993; 166:666-671.
6. Rasmussen I, Enblad O. Acute Solitary Diverticulitis of the Caecum. Acta Chir Scand 1988; 154:399-401.
7. Waugh TR. Appendix vermiformis duplex. Arch Surg 1941; 42:311-320.
8. Lauridsen J, Ross FP. Acute diverticulitis of the cecum, A Report of 4 Cases and a Review of 153 Surgical Cases. AMA Arch Surg 1952; 64:320-330.
9. Schuler JG, Bayley J. Diverticulitis of the Cecum. Surg Gynecol Obstet 1983; 156:743-748.
10. Luoma A, Nagy AG. Cecal Divertivculitis. CJS 1989; 32(4):283-286.
11. Mariani G, Tedoli M, Dina R, Giacomini I. Solitary Diverticulum of the Cecum and Right Colon. Dis Col and Rect 1987; 30(8):626-629.
12. Cutajar CL. Solitary Cecal Diverticulitis. Dis Colon Rectum 1978; 21:627-629.
13. Wyble EJ, Lee WC. Cecal Diverticulitis Changing Trends in Management. Southern Med J 1988; 81(3):313-316.
14. Wagner DE, Zollinger RW. Diverticulitis of the Cecum and Ascending Colon. Arch Surg 1961; 83:436-443.
15. Crist DW, Fishman EK, Scatarige JC, Cameron JL. Acute diverticulitis of the Cecum and ascending colon diagnosed by computed tomography. Surg Gynecol Obstet 1988; 166(2):99-102.
16. Fischer MG, Farkas AM. Diverticulitis of the Cecum and Ascending Colon. Dis Col Rect 1984; 27:454-456.