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Sigmoid Volvulus: A Case Report

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Abstract: ***Aims and Objectives**: Reporting a case of sigmoid volvulus, pitfall of misdiagnose and choice for long-term treatment. **Materials and Methods**: Sigmoid Volvulus is uncommon <4 % of all large bowel obstruction cases. A 47-year-old Javanese woman came to emergency department of sanjiwani hospital with stabbing pain in the entire abdominal area,the patient also fell nausea and her stomach fell bloated, patient have experienced similar complain before 5 month ago. In physical exam the heart rate was 86 and blood pressure is 120/80 the abdominal wall seems distended and there are tenderness on lower quadrant of abdominal wall. Initial diagnose from emergency department is partial ileus obstruction. With the abdominal radiography finding the diagnose is change to sigmoid volvulus and patient is prepared for urgent low anterior resection surgery. **Results and Conclusion**: with abdominal radiography examination where "coffee bean sign" is found sigmoid volvulus diagnose can be made.Treatment of sigmoid volvulus in our patient is sigmoid resection and anastomoses.where it has a low recurrent rate for long-term treatment.*

Keywords: Sigmoid Volvulus, low anterior resection surgery, abdominal radiography, coffee bean sign

1. Introduction

Volvulus is one of the uncommon causes in large bowel obstruction compare to other causes, it is described by twisted of the bowel with sigmoid as the most common section[1,2]. In published study sigmoid volvulus have 16% mortality rate and it's increase to 47% in the presence of gangrene so it can classified as an emergency surgery case[3], clinical presentation of sigmoid volvulus is similar to acute bowel obstruction that is abdominal pain, distension, nausea, emesis and constipation[1]. With similar rate of incident in man and women sigmoid volvulus incident increase in elderly patient and chronically constipated person, so patient with recurrent symptoms have higher risk of getting sigmoid volvulus[2,4]. Plain abdominal radiography may lead to diagnosis with radiographic image reveal a distended loop of colon that may resemble a coffee bean appearance, a CT imaging with contrast is best use for confirmation diagnosis because it can differentiate cecal or sigmoid volvulus, it also can detect colonic ischemia. Endoscopy can be performed as a diagnostic tools and early treatment choice[5,6]. Treatment of sigmoid volvulus can divide to non-surgical treatment and surgical treatment[7], non-surgical treatment is using endoscopy to decompress and untwisting the bowel,95% success rate have been find in recent studies where patient with no sigmoid volvulus get initial decompression with endoscopy, but there are 43% of patient undergo endoscopy detorsion get recurrence volvulus[8,9].Surgical treatment is a choice after unsuccessful non-surgical treatment and required in patient with sign of complication like necrosis, perforation and shock, with low recurrent rate and 3,3% of mortality rate in planned surgery[10,11,12].

2. Case Report

A 47-year-old Javanese woman came to emergency department with stabbing pain in the entire abdominal area for 5 days, the pain is getting increase when the patient is on the move and it decrease when patient lie down. The patient also fell nausea and her stomach fell bloated there are no complain of fever and obstipation, patient have experienced similar complain before 5 month ago. In physical exam the heart rate was 86 and blood pressure is 120/80 the abdominal wall seems distended and on palpation there are tenderness on lower quadrant of abdominal wall without any stiffness or mass. Laboratory examination show no significant finding with normal white blood count 8,8x10ˆ3/uL. With the temporary examination, initial diagnose from emergency department is partial ileus obstructionand patient is transfer to surgery ward while waiting for abdominal radiography result. The initial management for patient is consist of antibiotic and gastrointestinal drugs, nasogastric tube is installed for decompression. Later, abdominal radiography show dilated intestine forms a coffee bean sign configuration (Fig. 1).With the abdominal radiography finding the diagnose is change to sigmoid volvulusand patient is prepared for urgentlow anterior resection surgery, in surgery the colon is found dilated up to one third of the rectum, the sigmoid is redundant with volvulus 180 ° counterclockwise with no sign of ischemic (Fig. 2). With this finding,sigmoid resection is performed for one third of proximal and anastomoses is performed with intra-luminal stapling device. The patient was admitted to inpatient care followed by discharge on postoperative day

3. Discussion

Our patient presented with abdominal pain, nausea and bloated of the stomach with history of recurrent symptoms, partial ileus obstruction was the initial diagnosis for her. In sigmoid volvulus acute presentation usually consists of abdominal distention, constipation, distention and emesis[1,2]. The absence of constipation in the patient makes a false diagnosis in our case, no constipation in patient is suspected because it's only the leftover that going out. Peritonitis where is associated in chronic sigmoid volvulus was absent in our patient, with no stiffened on abdominal wall and normal white blood count in our patient make diagnostic misinterpretation even bigger[3]. Diagnostic of sigmoid volvulus where make after the abdominal radiographic result, with coffee bean sign that

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typical to sigmoid volvulus[4,5], history of recurrent symptoms also one of typical sign in sigmoid volvulus where it can be because of the redundant of the colon or the high-fiber diet which increase the chance recurrent twisting of the colon[1]. Management strategy of sigmoid volvulus consists of non-surgical treatment first then surgical treatment if there still any sign of ischemia or perforation, however surgical treatment can be taken immediately if there are signs of peritonitis[6,7,8], in our case one of the early treatments of patient is nasogastric tube installment where it was intended to decompress the bowel, even though endoscopic detorsion as non-surgical treatment was also intended to decompress and untwisting the bowel, we not recommend the using nasogastric tube installment as early treatment because it doesn't solve the problem completely[9]. After we diagnose the patient with sigmoid volvulus the definitive treatment of our patient is surgical treatment and with lack of edematous bowel, gangrenous tissue and adjacent inflammation sigmoid resection and anastomoses with intraluminal stapling device can be performed, treatment with endoscopic detorsion was not a choice because it has high recurrent rate[10,11],

4. Conclusion

In summary, our patient has atypical finding with no sign of peritoneal infection that usually associated with sigmoid volvulus and normal white blood count, hence the diagnosis of sigmoid volvulus is difficult to enforce, only with abdominal radiography examination where "coffee bean sign" is found sigmoid volvulus diagnose can be made. Treatment of sigmoid volvulus in our patient is sigmoid resection and anastomoses, with non-surgical treatment where not a choice because endoscopic detorsion has a high recurrent rate. In conclusion we suggest that patient with atypical acute bowel obstruction symptoms and no sign of peritoneal infection should still considered of suffering sigmoid volvulus and abdominal radiography is critical examination for diagnosing sigmoid volvulus. While choice of treatment of sigmoid volvulus should reconsider the recurrence of the disease.

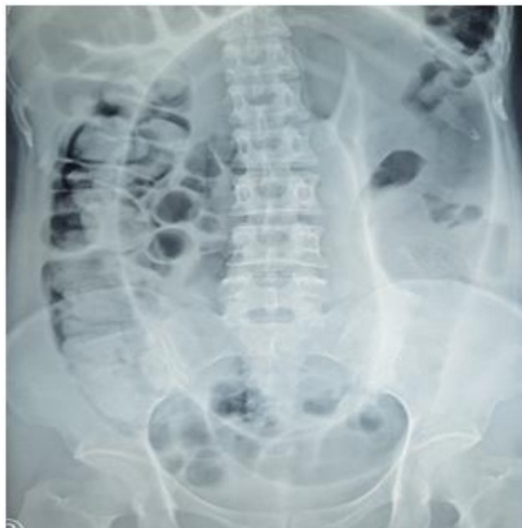

Figure 1: Abdominal radiography image show typical "coffee bean" of sigmoid volvulus presentation

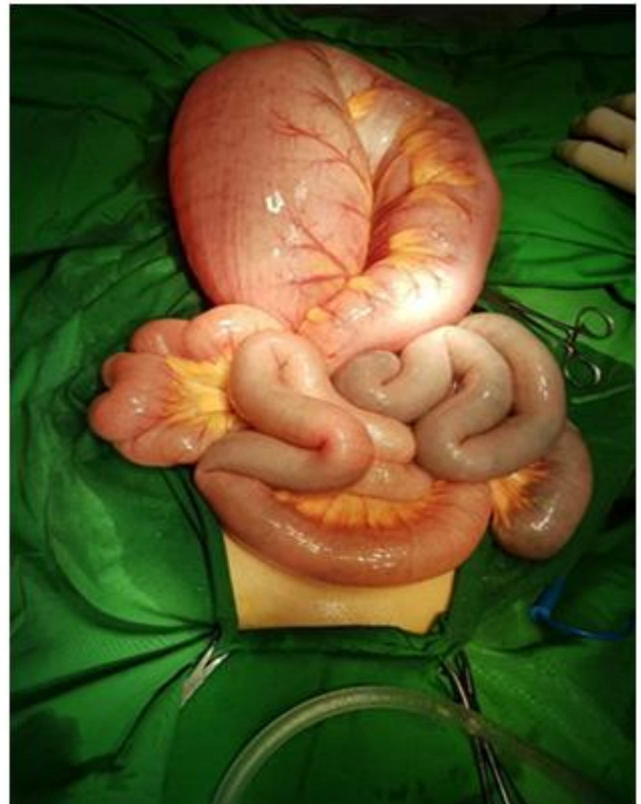

Figure 2: On surgery photo of volvulus sigmoid the colon is found dilated up to one third of the rectum, the sigmoid is redundant with volvulus 180 ° counterclockwise with no sign of ischemic

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