

Segmental Infarction of Omentum –A Case Report

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ABSTRACT

Idiopathic or spontaneous segmental infarction of omentum is a rare disease producing acute abdominal emergency. This rare entity is in a small group of abdominal emergencies with circulatory compromise. Infarction could be caused by omental torsion which could be due to adhesion of a previous surgery or it could be spontaneous. Less than 150 cases of idiopathic segmental infarction of omentum has been reported since it was first reported about hundred years ago. The importance of this abdominal emergency lies in differential diagnosis of acute appendicitis because its definitive diagnosis is made only after laparotomy. In these cases the appendix is normal and besides an amount of serosanguinous fluid in the peritoneal cavity, a segment of omentum is infarcted. A case of idiopathic segmental infarction is reported in a 37-year-old heavy weigh male. The suggested procedure is appendectomy and segmental resection of the necrotic piece of omentum. In this case no adhesion or torsion of omentum was present.

INTRODUCTION

Omental infarction is rare disease. This condition could be produced by omental torsion which is due to adhesion of previous surgery and is called bipolar or secondary, and it could be produced by torsion without an understand able cause and is called primay or unipolar (2,4).

But there is an even smaller group of omental infarction which is not caused by torsion neither primary nor secondary and the etiology is not well understood. Our reported case is in last group of omental infarction.

Case Report

M.T. is a 37-year old heavy weight large framed male who developed abdominal pain almost a day before admission. The pain was located mostly in the right lower quadrant of the abdomen. The pain has been constant which intensified by movement and coughing. The patient was anorectic and had hours of severe nausea, but no vomiting. In a complete blood count, he had normal white count with a slight shift to the left, and a normal urinalysis. On physical examination he had tenderness and rebound tenderness in McBurnry's point, he had also tenderness and rebound in the left lower quadrant of the abdomen with less severity. His temperature was 37.5 centigrade with mild tachycardia. The abdomen had a hypoactive peristalsis on auscultation. The patient was observed for several hours with no improvement in his condition, so he was operated with presumptive diagnosis of acute appendicitis. With a grid-Iron incision, on entering the peritoneum there was about 150 cc of serosanguinous fluid oresent in the abdominal cavity. The appendix was normal as well as other viscera as far as it could be inspected through the incision. The ileal loops were normal and there was no Meckel's dicerciculu. An area of omental necrosis was found overlying the right lower quadrant which was 3×4cm in diameter. A classic appendecto my and segnebtal resection of infacted omentum was performed and surgery was concluded. the patient's condition was well postoperatively and was discharged 36 hours after admission. The pathology reported a normal appendix with an omental necrosis and occluded omental veins.

Etiology

The cases is not well understood, and this is why the disease is called idiopathic or spontaneous. It is thought however that there are few predisposing factors such as overweight, specially those with a fat omentum. In such a condition the veins are more abundant and are tortuous, so a traction on omentum due to its heavy weight could cause traction and endothelial damage. Also as increase in the abdominal pressure heavy lifting can predispose the venous endothelium for thrombosis and clot formation (1,4,6,7) Anatomically the right half of omentum is longer in some people and is heavier, so the stretching could be more pronoinced on the heavier side. The condition is more likely followed by lifting heavy objects or eating a heavy meal. Some of the omentum have two distinct halves and are called bifid (1,4,6,7). When infarction is due to torsion, the heavier side of omentum can easily rotate while peristalsis can also help out the torsion. The occupation of the reported patient is such that he lift heavy pachs of paper and books, and this could well been a predisposing factor. In medical literature infection and trauma, vasculitis and oikycythemia and congestive heart failure also has been mentioned as predisposing factors. It should be mentioned that the torsion is in clock-wise direction (2).

Signs and Symptoms

All the patients have localized RLQ gaurding and tenderness on palpation. The pain is of sudden onset and constant, in torsion cases the pain is in RUQ as well. Half of the patients have hypoactive peristalsis and 50% have a slight fever (37.5°C). Most of the patients have leukocytosis of more than 10000 mm³.

The flat film of the abdomen is normal, but 25% of patients had sentinel loop when retrospectively examined.

Usually almost all the patients undergo surgery and the definitive diagnosis is made at laparotomy. In segmental infarction of omentum the patients might have been observed for 2-24 hours. As the torsion cases have pain and tenderness in right upper quadrant of the abdomen they could be mistaken for acute cholecystitis (4,6).

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The most constant and almost pathognomonic finding at operation is serosanguinous fluid in the abdomen (1, 2, 3, 4, 5, 6, 7, 8, 9). The size of segmental infarction which is normally located in right lower quadrant is between 2 to 15cm in diameter. In torsion cases the congested inflamed omentum is hanging in the peritoneal cavity which has been rotated a few times and is of black or blue color, in these cases also there is serosanguinous fluid present in the abdomen (2, 4, 6, 8, 9).

DISCUSSION

The first case of segmental infarction of omentum was reported in 1896 and in 1920 a full description about this condition was written (9).

In 1899 reported infarction of omentum was reported due to torsion (9). Only 150 cases of idiopathic segmental infarction of omental and 250 cases of omental torsion and infarction has been reported so far in literature (9). The first omental infarction in children was reported in 1937 (9), and was described again in 1941 (9).

The incidence in children is 1/3 of adult patients and segmental infarction in them is more frequent than torsion cases, the reverse of what we see in adults (1). In microscopic diagnosis there is no difference between segmental infarction and infarction due to torsion. The signs and symptoms are similar, but the site of pain is different. In a 30-year study in a children hospital, the incidence of this condition was 1:800 cases of acute appendicitis (1). So it could be said that the incidence of this condition is much more than what is being reported and is useful of all surgeons to have this in mind when dealing with acute abdominal emergencies.

There is no known case of this condition that has been diagnosed preoperatively (2). It can be postulated that there may be cases of segmental omental necrosis which did not come to operation or has not been diagnosed preoperatively and the necrotic segment has been left in the abdomen and they have been fully recovered.

It is advisable to remove the appendix as well as the infarction segment of omentum. The mortality rate is similar an uncomplicated acute appendicitis. Death has been reported due to septicemia due to infarction of omentum.

It should be said that on laparotomy when there is serosanguinous fluid in the peritoneal cavity and infarction is seen, there is no need to explore the abdomen further and the diagnosis is certain.

Health Care and Prevention

Since this condition is seen in the obese patients, it is highly advisable to loose weight especially those who have a protuberant abdomen due to a fat omentum. In other words there is almost no chance of a thin omentum to go into torsion or get infarcted. People should not exercise after meals, especially those who consume heavy meals. Obese persons should not lift heavy objects, or exercise on a full stomach. Patients with polycythemia, congestive heart failure and vasculitis also should treat their underlying disease and avoid lifting heavy objects after eating.

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