

## Case Report

# Primary omental torsion - A rare case report

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## Abstract

Primary omental torsion occurs when the mobile thickened segment of the omentum rotates around a proximal fixed point in the absence of any association or secondary intra abdominal pathology and is reported rarely in literature. Our patient was a 55 year old postmenopausal woman who presented with acute abdominal pain on the right side for 3 days and was diagnosed to have primary omental torsion.

## Key words

Acute abdomen, Omental infarction, Omentectomy, Primary omental torsion.

## Introduction

Primary omental torsion occurs when the mobile thickened segment of the omentum rotates around a proximal fixed point in the absence of any association or secondary intra abdominal pathology. Morris in his study has stated that the condition can affect any age group predominantly affecting 30-50 years of age. Male to female preponderance is 2:1. Infarction of the greater omentum occurs at the rate of 0.1% of all laparotomies performed with incidence being

0.0016-0.37% [1]. 90% of omental infarction occurs in the right side of the omentum. 0.6-4.8% of omental infarction is diagnosed preoperatively [1].

## Case report

### History

A 55 year old postmenopausal female presented with complaints of acute abdominal pain in the right side for 3 days associated with vomiting for 1 day. There was no history of fever. No co-

morbidities were present. History of thermoacoustic tomography (TAT) was done. A diagnosis of perforative peritonitis was made clinically.

### Examination

General examination of the patient showed dehydration, anemia with stable vitals. Local examination revealed guarding and tenderness in the right hypochondrium. Per rectal examination was normal.

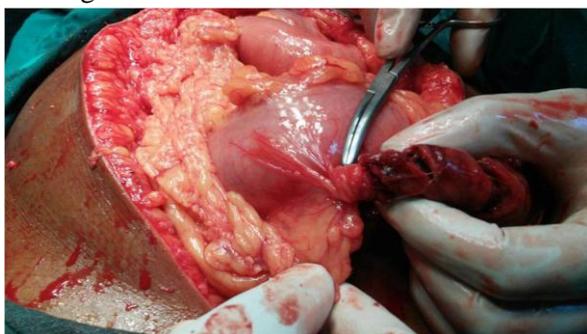
### Imaging

CT abdomen showed omental infarction towards the right side of the abdomen. Rest of the abdomen was normal.

### Treatment

After obtaining anesthetic fitness, patient was taken up for surgery. An emergency laparotomy was done and a diagnosis of right sided omental torsion was made peroperatively and omentectomy was performed. Patient tolerated the procedure well. Post operative period was uneventful (**Figure – 1, 2**).

**Figure – 1:** Omental torsion with anti clockwise twisting.



**Figure – 2:** Gangrenous omentum.



## Discussion

Primary omental torsion is differentiated from secondary omental torsion as per **Table – 1**.

**Table – 1:** Difference between primary and secondary omental torsion.

Primary omental torsion	Secondary omental torsion
Unipolar	Bipolar
Proximal segment remains fixed, other tongue is free	Fixation of omental tongue, both proximally and distally subsequent to adhesions from pathological condition. Inflammation by contiguity → appendicitis, cholecystitis

Predisposing factors for primary omental torsion due to infarction are as under.

- Presence of tongue like projections of greater omentum
- Bifid or accessory omentum [2]
- Anomalous vascular blood supply
- Vascular anomalies that modify the weight of omentum
- Vascular kinking [2]
- Irregular omental pedicle- mostly in obese patients

Secondary omental torsion occurs secondary to pre existing abdominal pathology like

- Cysts
- Tumors
- Foci of abdominal inflammation
- Surgical wound
- Hernia sac- most cases of secondary omental torsion occurs in patients with hernia

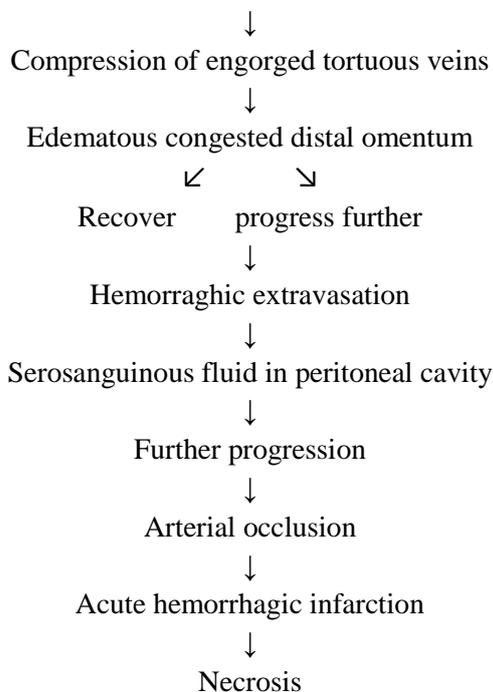
Precipitating factors for secondary omental torsion are as under

- Trauma to abdominal wall [3]
- Cough
- Effects of lifting heavy weights
- Hard labor
- Heavy meals- hyperperistalsis [2]
- Violent purgation

- Taxis of hernia

### Pathogenesis [3]

Omentum twists around pivotal point (clockwise twist usually)



Omental infarction - other causes are as under

- Hypercoagulable state
- Vasculitis
- Right heart failure - congestion of mesenteric vessels
- vascular anomalies - predisposing to thrombus

### Differential diagnosis

- Acute appendicitis
- Cholecystitis
- Meckels diverticulitis
- Regional enteritis
- Peritoneal pedicle torsion
- Mesenteric lymphadenitis
- Mesenteric thrombosis

### Investigations

- USG - Usually normal. Used for excluding differential diagnosis
- CT - It is the most effective modality and diagnosis is accurately achieved.
- MRI

### Management

Conversely radiological diagnosis is ineffective in differentiating between infarction of greater omentum and infarction by torsion. Omental torsion is usually diagnosed during explorative laparotomy which represents both diagnostic and therapeutic procedure. Laparoscopy is the first choice of procedure for omental torsion.

### Conclusion

Omental infarction is a rare cause of acute abdomen with an incidence equivalent to less than 4 cases per 1000 cases of appendicitis. In the view of preponderance of right side presentation it has been suggested that the right half of the omentum consists of anatomically altered vasculature less tolerant of spontaneous venous stasis with thrombosis secondary to omental torsion [4]. We have reported this case for its rarity.

### References

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