

## Primary Torsion of Omentum

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### Abstract

The purpose of the study is to report a case of spontaneous, primary torsion of omentum. The analyses showed the signs of inflammation, and the main symptom was vomiting. Physical examination: high tenderness and guarding in the ileocecal region. It was decided to operate on the patient immediately since the pain was severe and it was treated as an urgent case of appendicitis. The study aims to present that the typical clinical presentation of appendicitis can have other causes, for example, the torsion of omentum. The torqued part was gangrenous and it was resected. In the last 40 years, this has been the first registered case in our hospital. Having done the MEDLINE literature review, we are proposing a more elaborate classification of the torsion of omentum.

**Keywords:** Omentum; Torsion; Diagnosis; Appendicitis

## Introduction

The primary torsion of the omentum is a rare cocondition. That can be preoperatively diagnosed only if the twisted part of the omentum is not completely gangrenous. In the process of literature reviewing, we have not found a single study dealing with the suspicion of the torsion before doing CT scans, MRIs or rarely, an ultrasound. The total number of studies found by the PubMed search was 500 (and almost the same number of the cases for all ages). The prevention of the primary omental torsion is still unknown.

## Case Report

A 56-year-old man (a flooring installer) felt severe pain in the ileocecal region while he was working. After working he was referred to the department of surgery where he was immediately operated on, after necessary preparation, as an urgent case suggestive of appendicitis, since he presented with tenderness in ileocecal region with localized guarding, and with signs of inflammation and forced positioning. A lower right pararectal incision was done. The exploration revealed a normal appendix, and therefore the incision was enlarged superiorly. Torqued omentum with gangrenous distal part was noticed above the cecum and it was removed by means of resection. Further exploration did not reveal any other pathological substratum.



**Figure 1:** Torsion and distal gangrene



**Figure 2:** Resected part



**Figure 3:** Resected part –the other side

## Discussion

Torsion of the omentum is a rare pathological condition that can be primary and secondary, depending on the causes [1]. In the 40-year period of time, this has been the first case of primary gangrenous torsion in the hospital which is gravitated to by 300.000 people. Ratio is less than 4 cases per 1000 cases of appendicitis. The patient was immediately operated on as the case of appendicitis was suspected and which is the most frequent differential diagnostic dilemma. The surgery is easily done through open resection [2] and by laparoscopic surgery [3].

Torsion may occur with incomplete occlusion of blood vessels (figure 1-3), and therefore there are 3 to 4 days left for further examination – CT, MRI, laparoscopic exploration [4,5]. In the presented case, the pain was sudden, severe and intraoperative the omentum was found to be twisted about 720 degrees on its axis, including distal gangrene (figure 1, 2, 3).

On Medline and PubMed we found 635 cases of torsion by searching “torsion of omenti”. Including a filter “humans”, the number was decreased to 576, and when adding a filter “English”, it was 286. After including a filter “adults”, the total number of the studies was 161. When the “non-English-language” filter was added, it still showed a rare number of cases. Having reviewed 161 studies published in English and presenting cases of adult patients, we noticed 10 studies at least which were related to ovarian torsion, without the omentum. A small number of studies contained more than 1 case, mostly 2 or 3, often for a longer period.

Analysis of all cases clearly indicates that the causes of secondary torsion are not the same. Therefore, we are proposing a classification of torsion into primary and secondary, while the origin of the secondary causes can be: 1. in pathological substrata in the omentum itself; 2. outside the omentum. The most frequent cause is a hernia [6], carcinoma or a polycystic ovary [7], and appendicitis [8]. Pathological causes in the omentum itself are (fibro) lipoma of the omentum [9], a cyst or a polycystic omentum [10], fat necrosis [10], RY anastomosis [11]. In rare cases, as ours is, clinical features do not allow further examination.

The pathogenesis of the omental torsion is more interesting than the surgical procedure itself, which includes the resection of the affected part and suturing the healthy edge of omentum. The most probable cause is a sudden twist of the body. Predisposing factor is greater omentum, obesity or pregnancy [10]. There is no explanation without a doubt.

When ileocecal pain is present, torsion should be considered although the surgical procedure is relatively easy, and laparoscopy can also be done.

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