



Omental Infarction: A Case Report of a Conservatively Managed 60-Year-Old Ethiopian Woman

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Abstract

Omental infarction is a rare clinical condition with symptoms mimicking serious causes of acute surgical abdomen. Consideration of high order imaging modality in patients with right sided abdominal pain inconsistent with typical presentation of the common surgical conditions can establish its preoperative diagnosis. While the gold standard treatment modality for omental infarction remains to be established, inpatient conservative management should be considered in selected patients. Emergent surgical intervention should be deferred unless strongly indicated by complications. This case report is the first one documented in African setting to be diagnosed preoperatively and treated conservatively.

Keywords: Omental infarction; Acute abdominal pain; Conservative management; Ethiopia

Introduction

Omental infarction is a sporadic clinical entity presenting as an acute abdominal pain. First described by Eitel in 1899, the disease disproportionately tends to occur in the fifth decade of life, with an even higher frequency in obese men [1-4]. Omental Infarction (OI) can be primary (idiopathic) without attributable insult, or secondary to other pathologies. The culprits incriminated include omental torsion, neoplasms, vasculitis, hypercoagulability, and polycythemia [4,5].

Embryologically, the omentum is a fat laden peritoneal remnant of embryological development and anatomically divided into the greater and lesser omentum. The right-sided omentum is nine times more commonly involved than its left counterpart, partly due to its greater length and mobility, and hence greater susceptibility to tort along its long axis compromising its vascular supply [6,7]. Omental infarction is a rare condition with symptoms resembling those of acute appendicitis and is infrequently diagnosed preoperatively, making it an intra operative surprise [8]. Although the increasing use of high-quality imaging has made its preoperative diagnosis more common, the standard treatment modality for omental infarction has not been fully established to date [4,9]. Herein, we report a case of idiopathic omental infarction that was managed conservatively, drawing particular attention to contemporary diagnostic and management considerations.

Case Presentation

A 60-year-old woman presented with a one-day history of sudden onset, continually progressive right sided abdominal pain with no radiation. She also claimed to have frequent nausea with dry heaves, but no vomiting episodes. Apart from this, she had no history of feverish episodes or chest complaints. Her medical history was positive for neuropathic pain of four years duration, for which she had been taking oral amitriptyline 25 mg nocturnally.

On physical examination, her vital signs were BP=140/80 mm of Hg, PR=70 bpm, RR=26 BPM, Temp=36.8°C. Pertinent physical findings included BMI of 28.8, waist circumference of 99 cm, and slight abdominal distention with tenderness over the right hemi-abdomen and an ill-defined mass over the epigastric area. There was no guarding or rebound tenderness. Her examination was otherwise unremarkable. Blood tests revealed mild leukocytosis ($12.35 \times 10^9/L$) with differential counts as N84 L16, and mild thrombocytopenia (80,000 platelets/ μL). And her liver panel was remarkable for SGPT of 283 IU/L (>4 times elevated), which normalized in the subsequent days. All other blood tests including renal function tests and coagulation profile were normal. Abdominal ultrasonography revealed mild fatty liver. An urgent contrast computed tomography scan illustrated

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Figure 1: Omental infarction on right side of abdomen (blue arrow).

focal hypoenhancing omental lesion with heterogeneous fatty attenuation, thereby suggesting the diagnosis of omental infarction (Figure 1).

The patient was managed conservatively with tramadol-based analgesia, parenteral ceftriaxone, metronidazole and fluid management, coupled with bowel rest of six days. Blood inflammatory markers were regularly monitored keeping in mind that an increase in these markers and/or clinical deterioration should make surgical intervention due. As it happens, her clinical condition improved and the patient was discharged without complication after 15 days of inpatient management.

Discussion

Omental infarction is an infrequent but important cause of acute abdominal pain [2]. Its rarity is partly because of its relatively richer blood supply by multiple collateral vessels, primarily branches of the right and left gastroepiploic arteries. However, its incidence report looks to have increased gradually with the expanded access of advanced imaging technology [10]. With the availability of advanced imaging facilities and the steadily increasing metabolic syndrome pandemic [11], it is likely to continue encountering such a benign, self-limiting clinical scenario. To the best of our knowledge, this is the first case report of omental infarction to be diagnosed preoperatively and managed conservatively from Ethiopia and the rest of Africa.

Multiple predisposing factors including obesity, abdominal trauma, recent abdominal surgery, postprandial vascular congestion, sudden increase in intra abdominal pressure, and hypercoagulability have been implicated [3,12]. Other authors have also cited sudden body movements, laxative use and hyperperistalsis as contributing factors to the disease [13].

At present, there is no a well-established course of action for managing omental infarction. Accurate recognition of omental pathology on CT imaging means diagnosis can be attained preoperatively (without exploratory surgery), and in turn conservative management has become a practical option in the majority of the case reports [4,5], decreasing the possibility of over-management. Thus, one could consider the use of CT scan in cases like this, where the diagnosis remains equivocal and exposure to radiation or intravenous contrast is not a significant concern for the patient.

In our case, the patient was successfully managed conservatively. Our success was congruent with the case series systematic review done by Medina-Gallardo et al., which documented a failure rate for conservative treatment of only 15.9% [4]. Of interest, the previous

systematic review added that younger age and white blood cells count $\geq 12000/\mu\text{l}$ at admission were predictive factors of conservative treatment failure. This is more or less corroborates with our patient whose age was 60 years and white blood cells were close to the cutoff point (12000/ μl). However, if failed, such nonsurgical treatment can potentially lead to complications such as omental abscess, sepsis, adhesion and intestinal obstruction [13,14]. Therefore, conservative management should be blended with frequent reassessment and regular monitoring of blood inflammatory markers, and a low threshold for pursuing surgical management [5]. In events where conservative strategy is unsuccessful, surgical approach such as laparoscopic or exploratory laparotomy are experienced options. Typically, surgical treatment involves resection of the affected omental part with or without appendectomy. Authors who advocate for prompt surgical treatment argue that surgery leads to a faster resolution of symptoms and faster recovery, without need of follow-up [4].

The main disadvantages of conservative management are extended hospital stay and an increased use of analgesics [14,15]. While we note that clinical prudence can potentially avoid unnecessary surgery, we suggest cost-effectiveness analysis be done that compares cost of surgical treatment vs. the longer hospital stay of conservative treatment, particularly in resource limited countries such as Ethiopia. Again, patient preferences and laparoscopic experience of the surgical team may also be considered for the decision-making process.

Concluding Remarks

Omental infarction should be considered among the list of differential diagnosis for acute abdominal pain, particularly in obese middle-aged population presenting with right-sided abdominal pain. And diagnostic CT scan should be considered in events of diagnostic ambiguity. Hence, inpatient conservative management should be entertained while deferring emergent surgical intervention unless strongly indicated with complications.

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