ejpmr, 2017,4(3), 471-473.

SJIF Impact Factor 4.161

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Case Report

ISSN 2394-3211

EJPMR

SECONDARY TORSION OF THE GREATER OMENTUM DUE TO LONG STANDING INGUINAL HERNIA: A CASE REPORT

Dr. Gaurav Raj*

Dr Ram Manohar Lohia Institute of Medical Sciences, Lucknow, Uttar Pradesh, India.

***Corresponding Author: Dr. Gaurav Raj**

Dr Ram Manohar Lohia Institute of Medical Sciences, Lucknow, Uttar Pradesh, India.

Article Received on 10/01/2017 **Article Revised on 01/02/2017** **Article Accepted on 21/02/2017**

ABSTRACT

Omental torsion is a rare cause of acute abdominal pain; diagnosis of omental torsion is usually difficult because clinical signs and symptoms are similar to other common causes of abdominal pain. We report the characteristic computed tomography (CT) scan findings and the clinical implications of this unusual diagnosis in a 27year-old man, who also had longstanding right inguinal hernia. Awareness of omental torsion as a differential diagnosis in the acute abdomen setting is necessary for correct patient management.

KEYWORDS: Greater omentum torsion, inguinal hernia.

CASE HISTORY

A 27-year-old male presented with acute abdominal pain in right iliac fossa region. He had a ten-year history of untreated right inguinal hernia and now complaining of acute pain in right iliac fossa region for one day. Physical examination revealed severe tenderness in right iliac fossa region. Inguinoscrotal hernia was still reducible without obvious tenderness in hernia sac. Blood investigations revealed an elevated total white cell count of 14500/cu mm, with
neutrophil predominance.

Ultrasonography (USG) of the abdomen & inguinoscrotal region was done, which showed the presence of an right side reducible inguinoscrotal hernia with herniation of omental fat. An ill defined echogenic mass lesion is seen in right iliac fossa on abdominal Ultrasonography. An urgent CT scan of the abdomen and pelvis was performed with a suspicion of acute appendicitis. A contrast-enhanced CT scan of the abdomen showed a heterogeneous fat-density mass lesion with concentric streaks in characteristic whirling pattern involving greater omentum (Whirl sign) (Figure 2). Twisted vascular pedicle is also noted just superior to concentric mass lesion(Figure 1).Caecum and appendix were visualized normally with mild displacement of Small bowel loops.

CECT coronal images showed right inguinoscrotal hernia with defect of size 17.7 mm in right inguinal canal region. Haziness is seen in greater omentum. (Figure 3) On the basis of CECT finding diagnosis of right side inguinal hernia with torsion of greater omentum was made. Patient was managed conservatively with IV antibiotics and analgesic. Patient showed improvement in clinical s signs and symptoms with decline of total leukocyte count on conservative management. right side herniorraphy was performed two week after clinical improvement.

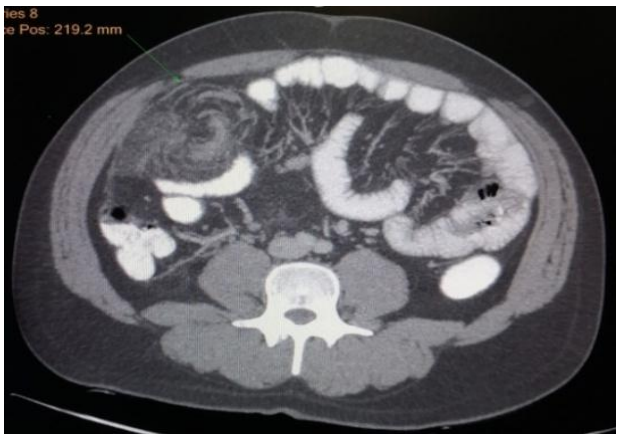

Figure 1.

Figure 2.

Figure 3.

DISCUSSION

Torsion of the greater omentum is a rare cause of acute abdominal pain which is caused by twisting of the omentum leading to ischemia and infarction. Omental torsion is difficult to diagnose clinically.[1] It presents as acute onset abdominal pain located in the right iliac fossa mimicking acute appendicitis. it may also confused with acute cholecystitis, pancreatitis and perforated duodenal ulcer.

Omental torsion may be classified in two types primary& secondary. Occurrence of secondary torsion is more common than primary.[2,3,4] Primary forms occur more often in the third and fifth decade of life and are more common in men than women .

It may also occur in children. The cause of primary omentum torsion is usually due to rotation of the movable portion of the omentum and may be associated with several factors, such as long omentum, bifurcated omentum, obesity, tongue-like projections from the free edge of the omentum and accessory omentum.[6]

Secondary omental torsion is usually seen in patients with bulky abdominal tumor[3,5,7], inguinal hernia,[3,5,6] or as sequelae of a surgical procedure.[5] Mechanisms initiating torsion include trauma, obesity, physical activity, coughing, pregnancy[7],[8], abdominal surgery[7],[8] and constant movement of the omentum by peristalsis. Cases presented in this study, had long standing right side inguinoscrotal hernia as predisposing factor for omental torsion.

On examination local guarding and tenderness is frequently presented in the right iliac fossa.[9], [10] One third of cases may show presence of mobile tender mass. Nausea vomiting & fever may be present in some cases , mimicking symptom of acute appendicitis.[10],[11] On laboratory examination, leucocytosis is nearly always present.

An abdominal X-ray is nonspecific in most cases of omental torsion.[12] Omental torsion is a self limiting condition, responds to conservative treatment therefore its very important to make accurate preoperative diagnosis to avoid unnecessary surgical intervention.

With easy availability of CT scan, omental torsion can be diagnosed confidently. Alteration in fat density of greater omentum is presented in all cases of torsion. Localized fat densitly mass may be present. Concentric linear strand or whirl sign and hyperattenuating streaky infiltration are described in omental infarction. Twisting of vascular pedicle at the base of omentum is reliable sign of omental torsion.[13]

Our case presented with acute abdominal pain with fever and Leucocystosis mimicking acute appendicitis. CECT scan revealed concentric hyperattenuating streaks within greater ometum with presence of twisted vascular pedicle. Right side inguinoscrotal hernia was identified as predisposing factor for omental torsion.

Conservative treatment is effective in case of omentum torsion. Patient should be under continuous clinical, laboratorical and radiological observation.[14] Surgical intervention is required when clinical & laboratorical parameter worsen. Our case shows significant improvement with conservative management. Elective Inguinal hernia repair was done after clinical improvement.[15], [16]

CONCLUSION

Greater omental torsion is difficult to diagnose preoperatively. It presents as acute abdominal pain located more often in the right iliac fossa. Omental torsion is a benign self-limiting disorder and in most cases can be treated conservatively avoiding laparotomy,. An accurate diagnosis of greater omental torsion can be made with a CT scan. Although it is a rare acute abdominal condition, torsion of the omentum should be carefully excluded in patients with known predisposing factors, such as an inguinal hernia.

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