

Primary Abscess of the Omentum: A Case Report

Kusol Russameecharoen, M.D., Suwanit Therasakvitchya, M.D.

Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok 10700, Thailand.

ABSTRACT

A Thai woman, 63 years old, presented with high grade fever, abdomino-pelvic mass with pain five days before admission. Physical examination and ultrasonography suspected an ovarian tumor with complication. The operation was performed three days after admission. The greater omental abscess was found, while other visceral organs were normal. Partial omentectomy was performed, and histopathological report showed acute and chronic inflammation with multiple microabscesses. Antimicrobial therapy was continued post-operatively until clinical improved. Although primary abscess of the omentum is uncommon, it should be included in the differential diagnosis of the inflammatory abdomino-pelvic mass.

Keywords: Omentum; Abscess; Abdomino-pelvic mass

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In Gynecology, there are many causes of acute abdomino-pelvic pain with palpable mass. Provisional diagnosis depends on the location of the mass, age group, etc. When the patients are in reproductive period, the pregnancy condition should also be aware of.

Mostly of pelvic masses are tumours originating from the reproductive organs, either benign or malignancy. The others may be the result of functional change, infection or obstruction. The diagnosis is based on history taking, physical examination and relevant investigations.

In cases of palpable pelvic mass with acute pain and tenderness, the complications of this mass should be considered such as torsion, rupture, hemorrhage or infection. These complications are emergency surgical conditions. Sometimes clinical data alone can not give the definite diagnosis before surgery.

CASE REPORT

A Thai woman, 63 years old, G9P8A1, with poorly controlled diabetes mellitus and hypertension for two years, presented with high grade fever, a painful abdomino-pelvic mass for five days. She had no history of abnormal vaginal bleeding and discharge. She had nausea, vomiting and diarrhea. Her urination was normal. She denied anorexia and weight loss.

She gave birth of her last child 27 years ago and had been menopause for more than 10 years without hormonal replacement therapy. The past history and family history were unremarkable.

Physical examination showed blood pressure 180/100 mmHg, pulse rate 110/min, respiratory rate 24/min and temperature 39.0°C. Physical examination showed a large abdomino-pelvic mass, about 20 weeks pregnancy size, with tenderness. Rebound tenderness was negative. Pelvic examination revealed a tense cystic mass, about 20 centimeters in diameter, with tenderness. Rectal examination was unremarkable.

Her blood tests showed hematocrit 34.3%, white blood cell count 20,100 /mm³, neutrophils 82.8 %, lymphocytes 5.1%, platelets count 440,000 /mm³, fasting blood sugar 181 mg%, BUN 27 mg/dl and creatinine 1.9 mg/dl. Pelvic ultrasonography showed a large mixed echogenic abdomino-pelvic mass. The provisional diagnosis was infected ovarian tumour.

Intravenous antibiotics (clindamycin 1,800 mg/day and ceftriaxone 2 g/day) were started after admission, and she was monitored for temperature, blood pressure, abdominal sign and symptom and blood sugar.

Her clinical findings did not improve. Exploratory laparotomy was performed after three days of admission and intravenous antibiotics. The operative findings showed the greater omentum adhered to the parietal peritoneum, extended to umbilical level. There was about 100 ml pus collection between them. After separation of the greater omentum from parietal peritoneum, we found some area (approximated 5 cm in diameter) of necrotic tissue and pus in the greater omentum. Other visceral organs including genital organs were unremarkable.

Partial omentectomy was performed and histopathological report revealed acute and chronic inflammation with multiple microabscesses. Gimsa and acid-fast stain of tissues were negative. Gram stain of pus collected during operation showed numerous polymorphonuclear cells,

Correspondence to: Kusol Russameecharoen
E-mail: rkuso@yahoo.com

mixed bacteria (gram negative rods, gram positive cocci) but culture showed no growth.

After the operation, antimicrobial therapy (intravenous ceftriaxone 2 g/day and metronidazole 1,500 mg/day) was continued. Her condition improved and blood sugar was well controlled. She was discharged after nine days of admission.

DISCUSSION

About 80% of the intra-abdominal abscesses are caused by infection of visceral organs,¹ such as the alimentary system. For female, infection of the genital organs should be included in the differential diagnosis.

Intra-abdominal abscesses occur occasionally after the operation of visceral organs.² In gynecological operations, it rarely occurs postoperatively except in high-risk cases such as contamination of surgical site or infected hematoma.

The diagnosis of the intra-abdominal abscesses is sometimes difficult. Clinical data or investigations may not be useful in many cases.^{1,2} Ultrasonography also has difficulty in diagnosis in this condition because small bowel gas obscure the visualization. CT scan seems to be more useful and should be able to locate the appropriate site of pus drainage clearer than ultrasonography.²

There are many protective mechanisms when an intra-abdominal infection occurs and progresses to abscesses. One mechanism is the process of surrounding organs to prevent the spreading of pus discharge. The important organ that takes this action is the omentum.

Primary omental disease especially infection or abscess rarely occurs.³⁻⁵ Knoop M³ reported four cases in 1999-2001, presented with acute abdomen and palpable mass. The operation was performed, two cases were primary torsion of the greater omentum, and the others were paracolic pseudotumour omentitis. These conditions were usually not considered preoperatively.

In this case, the clinical and ultrasonographic findings suggested infected ovarian tumour. After the operation was performed, we found that the greater omentum had become abscesses and adhered to the parietal peritoneum. Small bowel was dilated with some fibrin between bowel loops. Other visceral organs were normal.

Partial omentectomy was performed similar to previous reports^{3,5} and postoperatively antimicrobial therapy

was continued until the clinical improved.

The result of pus from gram stain showed numerous polymorphonuclear cells with mixed bacteria. Pus culture showed no growth. This result could occur if the causative pathogen was anaerobic bacteria which need specific media for culture, or might be due to prior antibiotic treatment.

Other pathogens should be considered such as TB, actinomycosis and amebiasis etc.¹ Foreign body, i.e. fish bone, may be a possible cause as reported by Namikawa T, et al.⁶ They reported a 67 years old female presented with epigastric pain. She was operated on and found omental abscess with a fish bone inside that might have perforated from her stomach.⁶

In this case, we did not know the primary cause of the abscess but we postulated that it might turn from hematoma to abscess according to the patient's underlying diabetes mellitus which might cause her omental tissue susceptible to microorganisms after unrecognized trauma at upper abdomen.

CONCLUSION

Although primary omental disease, such as abscess, is a rare condition, it can be the cause of abdomino-pelvic mass with pain. The preoperative diagnosis for this condition is mostly difficult and not be aware of until the operation is performed. The cause of primary omental abscess is unclear because in most cases there is no evidence of other visceral organs abnormality.

REFERENCES

1. Witzigmann H, Geissler F, Uhlmann D, Hauss J. Intraabdominal abscess. *Chirurg* 1998;69:813-20.
2. Clarke-Pearson DL, Alvarez A, Havrilesky L, Lancaster J. Preoperative evaluation and postoperative management. In: Berek JS, Rinehart RD, Hillard PA, Adashi EY. *Novak's Gynecology*. 13th ed. Philadelphia: Lippincott Williams & Wilkins, 2002:593-4.
3. Knoop M, Vorwerk T. Inflammatory alterations of the greater omentum-a difficult preoperative diagnosis. *Zentralbl Chir* 2002;127:626-8.
4. Otagiri N, Soeda J, Yoshino T, Chisuiwa H, Aruga H, Kasai H, et al. Primary abscess of the omentum; report of a case. *Surg Today* 2004;34:261-4.
5. Wang JY, Hsieh JS, Tsai KB, Huang YS, Hou MF, Huang TJ. Primary abscess of the omentum: report of a case and review of the literature. *Kaohsiung J Med Sci* 2001;17:327-30.
6. Namikawa T, Nakamura S, Kondo Y, Yamashita K, Miyazaki J, Araki K. A case of omental abscess due to gastric penetration by fish bone. *Jpn J Gastroenterol Surg* 1999;32:2553-7.

บทคัดย่อ

ฝีหนองปฐมภูมิที่ Omentum : รายงานผู้ป่วยหนึ่งราย

กุศล รัชมีเจริญ พ.บ. สุวณีย์ ธีระศักดิ์วิทยา พ.บ.

ภาควิชาสูติศาสตร์-นรีเวชวิทยา, คณะแพทยศาสตร์ศิริราชพยาบาล, มหาวิทยาลัยมหิดล, ถนน 10700, ประเทศไทย

รายงานผู้ป่วยหญิง อายุ 63 ปี มาโรงพยาบาลด้วยอาการไข้สูง ปวดท้อง และคลำได้ก้อนบริเวณตรงกลางท้องน้อยจนถึงระดับสะดือ ร่วมกับกดเจ็บบริเวณท้อง เป็นมาประมาณ 5 วันก่อนมาโรงพยาบาล ผลการตรวจร่างกายร่วมกับอัลตราซาวด์สงสัยเนื้องอกรังไข่ที่มีภาวะแทรกซ้อน ผู้ป่วยได้รับการผ่าตัดหลังจากรักษาด้วยยาปฏิชีวนะในโรงพยาบาลเป็นเวลา 3 วัน ผลการผ่าตัดตรวจพบว่าฝีหนองที่ greater omentum ซึ่งไปปะติดกับเยื่อช่องท้องบริเวณระดับสะดือ อวัยวะภายในอื่น ๆ อยู่ในเกณฑ์ปกติ ผู้ป่วยได้รับการผ่าตัดเอา omentum บริเวณที่ผิดปกติออก และส่งตรวจทางพยาธิวิทยา ผลการตรวจพบว่าเป็น acute and chronic inflammation with multiple microabscesses หลังผ่าตัดผู้ป่วยได้รับยาปฏิชีวนะต่อ จนอาการดีขึ้นตามลำดับและสามารถกลับบ้านได้ในเวลาต่อมา

แม้ว่า omental abscess จะพบได้ไม่บ่อย แต่ก็ควรอยู่ในการวินิจฉัยแยกโรคของผู้ป่วยที่มาด้วยไข้ ปวดท้อง และคลำได้ก้อนที่บริเวณท้อง