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Chronic Unruptured Primary Ovarian Abscess: A Case Report

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Abstract

This paper reports a case of primary ovarian abscess that was incidentally found at laparotomy in 2010. Clinical examination and ultrasound scan investigations usually have limitations in making the diagnosis, additional radiological investigations such as MRI can improve details but the final diagnosis may only be known at laparotomy. Diagnosing primary ovarian abscess presents with some difficulty because it is not a common ovarian pathological entity. The clinical signs and symptoms are non-specific and there are limitations in excluding tubal involvement with investigations usually performed before laparotomy. In this case report, the final diagnosis of primary ovarian abscess was only known at laparotomy. Microscopy of the purulent exudate showed presence of pus cells, numerous neutrophils and lymphocytes. The culture however was negative for microorganisms after 48hours. This unusual ovarian pathological entity was surgically managed successfully. Conclusion: Primary ovarian abscess may be incidentally found at laparotomy indicated for a more common ovarian pathology. Surgical management of a large unruptured primary ovarian abscess is associated with good prognosis.

Keywords

Ovarian Abscess, Primary Ovarian Abscess, Tubo-Ovarian Abscess

1. Introduction

An ovarian abscess is a primary infection of the ovary without involvement of the fallopian tubes[1]. It is usually a primary infection of the parenchyma of the ovary[2]. Primary ovarian abscesses occur when there is disruption of the ovarian capsule usually at the time of ovulation or during surgical procedures; giving bacteria access to the ovarian stroma[1,3].Infection of a previously existing ovarian cyst, dermoid cyst, or haematogenous and lymphatic spread of infection are other ways the ovaries can get affected[1,2,3]. There could be spread of infection from tonsillitis, parotitis, unruptured appendicitis or diverticulitis[2]. In tubo-ovarian abscess however, there is ascending infection from the cervix through the uterus to involve both the fallopian tubes and ovaries[1,4]. It is usually due to sexually transmitted infections or instrumentation of the female genital tract[4].

There may not be any symptoms in the initial stages of primary ovarian abscess; when symptoms develop, it usually varies from an abdominal mass increasing in size with time and presenting with pain appearing later. The development of pain may be as a result of pressure on the capsule; when the abscess ruptures it presents with life threatening complication such as an acute abdomen with septic shock[1,2]. Due to non-specific presentation and rare occurrence of primary ovarian abscess, the diagnosis is difficult to establish [5,6] before surgery and it is usually an incidental finding during laparotomy indicated for a more common ovarian pathology.

Pre-operative investigations such as ultrasound scan, CT-scan and MRI are useful in identifying a cyst, tumour or an abscess of the ovary[2,3] but the diagnosis of a primary ovarian abscess is usually difficult to make with these investigations. Ovarian cyst or tumour and tubo-ovarian abscess are usually the main differential diagnosis during investigations. Haematological test may not provide meaningful information in arriving at a final diagnosis. Treatment of primary ovarian abscess is both medical and surgical[1,2,3,6]. The treatment for a large abscess with symptoms is surgical as the diagnosis remains unknown until laparotomy. This case report is to draw attention to primary ovarian abscess which is usually an incidental finding during laparotomy and may go unrecognized without conscientious attention and alertness.

2. Case Report

A 46 year old para 6 was referred from a district hospital with a diagnosis of ovarian tumour for management in 2010. She was in a good state of health until she missed her menstrual period 12 months before presentation, which was perceived to be pregnancy. She was compelled to visit the district hospital for attention when she started experiencing severe abdominal pain at a time the perceived pregnancy prolonged beyond nine months. After initial examination and ultrasound investigation, pregnancy was excluded but she was however referred to the gynaecologist as a case of ovarian tumour for management.

She had no significant medical, surgical and family history. She had lost weight and appetite but had no early satiety, nausea or vomiting. She did not perceive fetal movements and abdominal enlargement similar to previous pregnancies. She had no headaches, dizziness, palpitations, hot flashes, diarrhoea, constipation or urinary symptoms. She could not tell her age at menarche, her menses were however monthly and regular. She usually bled for three days with mild dysmenorrhoea until cessation of menses about 12 months ago. She had scanty whitish vaginal discharge but had no dyspareunia. All her pregnancies, labour and puerperium were supervised by traditional birth attendants with no reported complications.

She looked ill but was not in distress; she was afebrile and was neither pale nor jaundiced. She was mildly dehydrated and had a body mass index of 20.5kg/m^2 with no peripheral lymphadenopathy. The breast and respiratory system were all normal. Her pulse rate was 76 beats per minute, regular with good volume. The blood pressure was 110/60 mm Hg, normal heart sounds without murmurs. The abdomen was distended with a mass arising from the pelvis. The mass was about 22 weeks gestation in size, firm and moderately tender with no sign of free fluid in the abdomen. The liver, spleen, kidneys and bowel sounds were all normal. The vulva, vagina and uterus were normal and the cervix was closed. The pouch of Douglas was free; the mass could not be displaced easily from the pelvis. There was no cervical excitation tenderness and no obvious vaginal discharge.

Investigations conducted included; ultrasound scans which showed normal size, anteverted and empty uterus. There was a cystic mass arising from the pelvis measuring 18.0 cm x 15.0 cm x 12cm in size. There was no free fluid in the abdomen. Haemoglobin 8.5g/dl, white blood count 16.8 x 10^3/UL, Neutrophils 72%, Lymphocytes 28%, Platelets 360 x 10^3/UL. Normal renal function test and negative sickling test.

Diagnosis of ovarian cyst with torsion together with results of investigations was discussed. She consented for laparotomy which was performed after the necessary preparations were completed. The findings at laparotomy included normal size uterus, normal right ovary and fallopian tube without signs inflammation. There was a large unruptured abscess of the left ovary 17cm x 16cm x 14cm extending to the level of the umbilicus with a normal left fallopian tube not involved in the abscess. Left salpingo-oophorectomy was performed ensuring rupture of the abscess did not occur during the surgery. The findings of the left ovary are attached in the figure 1 included below. The pelvis was normal without any signs of pelvic inflammatory disease. The bowels and the appendix were all normal. Estimated blood loss was 200mls.

The microscopy of the purulent exudate showed presence of pus cells, numerous neutrophils and lymphocytes. The culture however was negative for microorganisms after 48hours. Her condition was stable and recovery was satisfactory throughout the post-operative period. She received adequate analgesics, intravenous cefuroxime plus metronidazole for 48 hours, followed by oral cefuroxime and metronidazole for five days. She was discharged on the 5th postoperative day with haemoglobin of 9.6g/dl on haematinics with good wound healing.

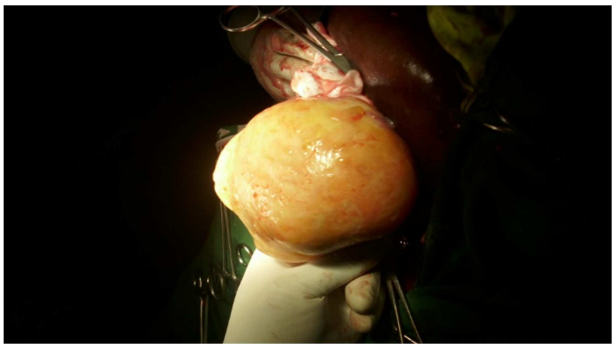

Figure 1. *A primary ovarian abscess of the left ovary*

3. Discussion

Primary ovarian abscess is an uncommon pathological entity of the ovary[1,2]. It may present as a long standing pathological process of the ovary with an acute onset of complications,[2] its occurrence during pregnancy has also been reported in the literature[2,3]. In this paper is a case report of primary ovarian abscess, an unusual pathological entity with a chronic presentation in a 46 year old woman that was managed in our hospital in 2010.

Microorganisms causing primary ovarian abscess includes salmonella, tuberculosis and actinomycoses Israelis associated with IUCD users [2,4,5,6]. Tubo-ovarian abscess is much commoner pathological entity involving the ovaries and tubes usually occurring together. It is a sequelae of recurrent episodes of sexually transmitted infections [4,7] resulting in chronic tubal damage and spread of infection within the pelvis.

Primary ovarian abscess my exist without acute symptoms for several months[8]as seen in this case presented until the abscess became large enough for complications to develop; the onset of pain was an indication of development of a complication or pressure on the capsule. Abscesses can rupture spontaneously, through accidental trauma, during bimanual examination or during laparotomy. Caution is needed to ensure that the abscess does not rupture to spill its purulent content into the abdomen at any time before surgical

removal. If no indication for hysterectomy plus bilateral salpingo-oophorectomy exists, then unilateral salpingo-oophorectomy or ipsilateral oophorectomy may be performed followed by broad spectrum antibiotics treatment before culture results are ready. Occurrence of ovarian abscess after total abdominal hysterectomy and drainage via vaginal route has also been reported[9].

Ultrasound scan and haematological investigations including full blood count showing leukocytosis and neutrophelia were of limited use in determining the final diagnosis. Use of MRI could have provided more useful detailed information as in the case reported by Monneuse et al[10] but MRI was not performed for the patient due access and cost considerations. The aetiology of primary ovarian abscess in the case reported remains unknown as no antecedent surgical procedure was performed in the patient. Case reports and review of literature have shown occurrence of an ovarian abscess after pelvic surgeries[3] and in recent times during assisted reproduction procedures[1,7,8].The microscopy of the purulent exudates showed evidence of an infection but the culture results were negative. The reasons for the negative culture may include inappropriate collection, transportation and storage of specimen, and type of culture medium used by the laboratory.

Her menses had ceased for the period of twelve months that she noticed the existence of the abdominal mass and never resumed during the treatment and follow-up. The abscess therefore may have occurred just at the commencement of the menopause.

4. Conclusion

Primary ovarian abscess may be incidentally found at laparotomy indicated for a more common ovarian pathology. Surgical management of a large unruptured primary ovarian abscess is associated with good prognosis.

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