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Ruptured corpus luteal cyst mimicking as an ectopic pregnancy

Savita Rathod*, Vijayalakshmi S.

Assistant Professor in OBG, Adichunchanagiri Institute of Medical Sciences, B. G. Nagar, Nagamangala, Mandya.
Professor & HOD of OBG, Adichunchanagiri Institute of Medical Sciences, B. G. Nagar, Nagamangala, Mandya

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*Corresponding author:

Email : dr_kirannaik@rediffmail.com
Tel.: 91-9740014716

ABSTRACT

A ruptured ovarian cyst is a common phenomenon, with presentation ranging from no symptoms to symptoms mimicking an acute abdomen. The most pressing issues facing clinicians encountering patients with potential cyst rupture in the acute setting are to rule out ectopic pregnancy, ensure adequate pain control, and rapidly assess the patient for hemodynamic instability to allow appropriate triage. Here we present a case of ruptured corpus-luteal cyst mimicking as ruptured ectopic pregnancy. 25 year old parous lady presented with 40 days of amenorrhoea and acute abdomen. On examination patientt was pale, had tachycardia with blood-pressure of 100/60 mmhg. P/V examination revealed left fornicial mass of 4x4 cm. UPT was negative, USG revealed a heterogeneously hypoechoic lesion in the left adnexa, with hemoperitoneum. A clinical diagnosis of ruptured ectopic pregnancy was made but emergency laparotomy revealed a left ovarian ruptured haemorrhagic cyst with active bleeding..In any reproductive age group, an acute abdomen should always arise a suspicion of ectopic pregnancy. However a ruptured corpus-luteal cyst should also be kept in mind. Diagnosis is done by ultrasound and treatment depends upon the presence or absence of hemoperitoneum suggestive of ruptured or unruptured corpus-luteal cyst respectively.

INTRODUCTION

A ruptured ovarian cyst is a common phenomenon, with presentation ranging from no symptoms to symptoms mimicking an acute abdomen[1]. Menstruating women have rupture of a follicle every cycle, which is either asymptomatic or with mild transient pain (*mittelschmerz*). In less usual circumstances, the rupture can be associated with significant pain. In very rare circumstances, intraperitoneal hemorrhage and death may occur. The most pressing issues facing clinicians encountering patients with potential cyst rupture in the acute setting are to rule out ectopic pregnancy, ensure adequate pain control, and rapidly assess the patient for hemodynamic instability to allow appropriate triage. Although most patients require only observation, some need analgesics for pain control and laparoscopy or laparotomy for diagnosis or to achieve hemostasis.

While some hemorrhage associated with ovarian cyst rupture has unclear etiology, there are recognized risk factors. These include abdominal trauma and anticoagulation therapy. The condition most commonly occurs in reproductive-aged women of 18-35 years. Cysts are very commonly found in women who have polycystic ovary syndrome and are, in fact, one of the defining characteristics of the disease. However, women who don't have PCOS can also get ovarian cysts.

Every month, a single egg follicle in the ovary develops and eventually releases the egg in a process known as ovulation. Sometimes, ovulation will not occur and the follicle will continue to grow larger and larger as the fluid inside of it builds up. If the wall of the follicle weakens, a tiny hole can form as the fluid starts to leak into the pelvic cavity. This fluid can be irritating and sometimes causes a great deal of pain. The pain will likely subside after a few days. Quite often, a woman doesn't even realize that she even has an ovarian cyst.

Anytime you are experiencing severe abdominal or pelvic pain, it should be immediately evaluated by your doctor or in the emergency room if you are not able to promptly see your doctor. There are many other conditions that can mimic the symptoms of a ruptured ovarian cyst, which can be very serious if not treated. This can include appendicitis, an ectopic pregnancy or even internal bleeding.If you had a ruptured ovarian cyst, the ultrasound will show some fluid around the ovary, and may even show the empty sac. An ultrasound can also help the doctor look for more serious conditions like internal bleeding. Such bleeding can occur if a blood vessel in the wall of the cyst ruptures, causing a lot of pain as the cyst fills with blood. Sometimes, large ruptured hemorrhagic cysts do need to be removed surgically.

If the cyst is small and does not look concerning to the physician, they will likely recommend that you have the cyst monitored for a few months to make sure that it goes away on its own. Sometimes, taking a month or two of birth control pills can help shrink the cyst. If you are especially prone to these small cysts, the doctor may suggest that you continue to take the birth control pill in order to help prevent a cyst from reoccurring.

CASE REPORT

25 year old parous lady with 2 full term normal vaginal delivery last delivery was 1 year back, tubectomised 8 months back and was getting regular monthly cycles since 5 months, got admitted with complain of pain abdomen since one day following 40 days of amenorrhoea and 1 episode of vomiting . There was no history of bleeding PV, on examination pt was pale,PR was 110, BP was 100/60 , on abdomen examination guarding , rigidity and tenderness was present in left iliac region, P/V uterus was normal size anteverted mass of 4 x 4 cm was present in left iliac region, tender, cervical movement tenderness was present, UPT was -ve, beta HCG-- <0.1mIU/ml, USG uterus normal size endo thickness 12mm ,left ovary normal in size with multiple follicles, within and is abutting the illdefined heterogeneously hypoechoic lesion in the left adnexa, lesion measures 5.2 x 2.7 x 4.8 cm in size with vascularity, right ovary normal (FIG. 1). Pouch of Douglas showed moderate amount of free fluid present with fine internal echoes suspicious of ruptured ectopic pregnancy.

Culdocentesis was positive. Patient underwent emergency laparotomy, per operatively 200ml haemoperitoneum was present , left side ovary was enlarged ~5x5cm with haemorragic cyst ~3x3 cm , cyst was ruptured with active bleeding (FIG. 2). So left sided ovarian cystectomy done, intra op and post op period was uneventful. Histopathology showed ovarian tissue with corpus leutum and no evidence of products of conception (FIG. 3).

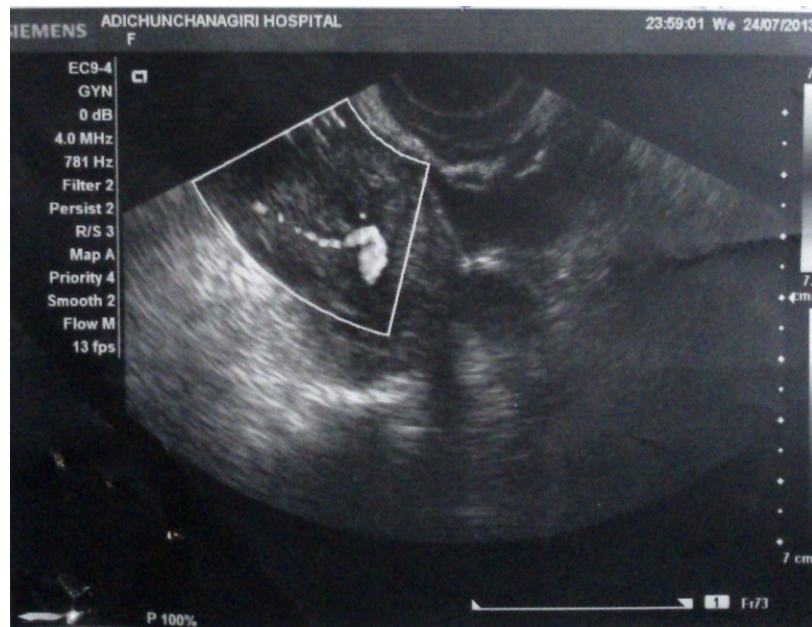

Fig 1. Ultrasound showing left adnexal mass with increased vascularity

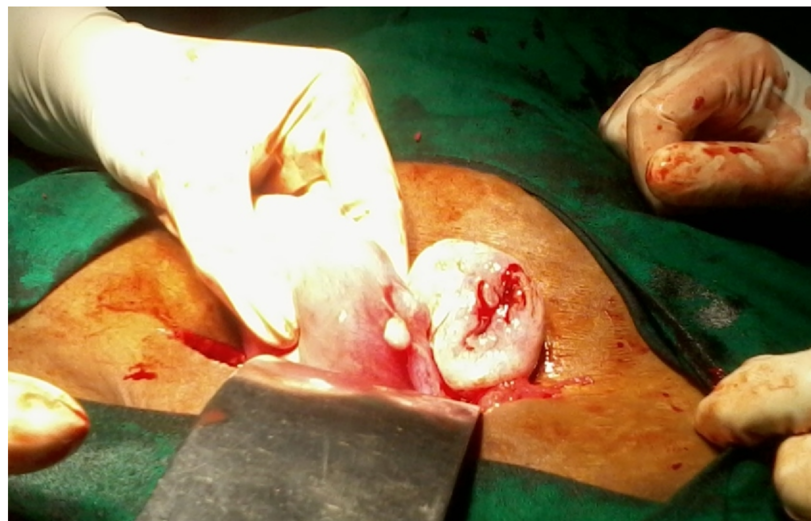

Fig 2. Intra-operative picture of ruptured ovarian cyst

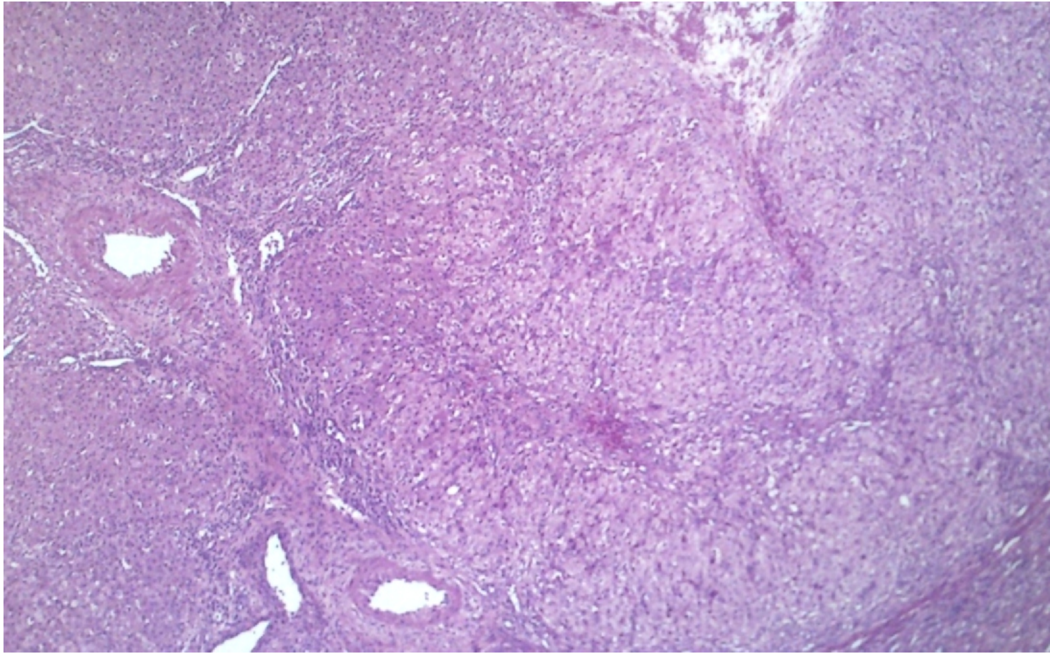

Fig 3. Histopathological picture of corpus luteal cyst

DISCUSSION

Hemoperitoneum is an emergency situation where there is intraperitoneal bleeding, needing accurate diagnosis and active intervention. A review of literature on rare cases of hemoperitoneum mimicking ectopic pregnancy is discussed. Hemoperitoneum due to tubal abortion in a woman with negative pregnancy test is reported by KaYuTse[2] Hemoperitoneum due to perforation of invasive mole was reported by Sunesh and Anuradha[2]. Powell Martin has published a case with clinical dilemma where a woman presented with spontaneous hemoperitoneum caused by gangrenous bowel due to post operative adhesions of hemorrhagic ovarian cyst. Massive hemoperitoneum from bleeding endometriotic nodule was reported by Mutihir from Nigeria[2]. Here we present a rare case of rupruted corpus luteal cyst with haemoperitoneum which mimicked ectopic pregnancy both clinically and radiologically.

The corpus luteum cyst is the most common adnexalmass , and is a common cause of pelvic pain. The pain is lateralized to the side of the cyst. Pain can be due to the size of the cyst, bleeding within the cyst, torsion, or rupture. The cyst is typically less than 6 cm in diameter, but may be larger. There is typically posterior through transmission because of the cystic composition. The internal echotexture varies, depending on the stage of hemorrhage and the amount of fluid within the cyst. This is best appreciated with transvaginal scanning. The diagnosis of a hemorrhagic cyst can be made with the presence of fibrin strands, a retracting clot, septations, and wall irregularity[3]. The wall of the cyst may appear thick or thin, ranging from 2 to 22 mm. The corpus luteum is a very vascular structure, and typically a ring of color flow can be demonstrated. It is important to recognize that this flow is a normal finding, so as not to mistake a corpus luteum for an ectopic pregnancy. If a hemorrhagic corpus luteum cyst is the cause of the patient's pain, it should be tender to direct pressure using the transvaginal probe[4] If it is painfree, another source for the patient's pelvic pain should be sought.

CONCLUSION

In any reproductive age group, an acute abdomen should always arise a suspicion of ectopic pregnancy and however a ruptured corpus luteal cyst should also be kept in mind. Diagnosis is done by ultrasound and treatment depends upon the presence or absence of hemoperitoneum suggestive of ruptured or unruptured corpus luteal cyst respectively[5].

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