

# **RUPTURED CORPUS LUTEUM CYST –A DIAGNOSTIC PITFALL**

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## **Abstract**

A 25year old P2+1 woman presented to the gynaecology emergency unit at the Federal Medical Centre Gombe with a one day history of abdominal pain and dizziness. Ultrasound scan diagnosis was that of acute ruptured ectopic pregnancy. She had emergency exploratory laparotomy with right oophorectomy. Histology revealed ruptured corpus luteum cyst. The management pitfalls are highlighted.

**Key words:** Luteal cyst, haemoperitoneum, laparotomy

## **Introduction**

Ruptured corpus luteum is not an uncommon phenomenon with presentation ranging from mild lower abdominal pain to massive intraperitoneal haemorrhage. Most of those in the former group may require just observation but the latter group most often need laparoscopy or laparotomy to achieve haemostasis<sup>1</sup>.The aetiology of severe bleeding from a corpus luteum is not well elucidated but abdominal trauma and anticoagulant therapy may increase the risk<sup>1,2</sup> .

## Case report

A 25-year-old P2+1, both alive woman presented to the gynaecological emergency unit with a one-day history of abdominal pain and dizziness which started shortly after intercourse. She had similar pain about two months prior to presentation which was relieved by Paracetamol. The index pain however was not relieved by Paracetamol and progressively worsened. There was no fainting attack. She had not used any contraceptive and no history suggestive of previous reproductive tract infection. She neither smoked cigarette nor took alcohol. Her last child birth was one year ago and her last normal menstrual period was two weeks prior to presentation.

On examination, she was found to be a young woman who was afebrile to touch but moderately pale. Her pulse rate was 100beats/minute and the blood pressure was 100/70mmHg. On abdominal examination, there was tenderness in the suprapubic region with demonstrable shifting dullness. Vaginal examination revealed a closed cervix. The uterine size could not be determined due to tenderness. There was a tender right adnexal mass. The pouch of Douglas was full and cervical movements were tender.

Ultrasound scan revealed a uterus of 4.2cm in anterior posterior diameter with slightly thickened endometrial echoplate ?decidual reaction. There was a complex right adnexal mass measuring 4cm x 4.2cm with increased peritoneal fluid collection extending up to the Morrison's pouch. The left ovary was normal and contained growing follicles within it. An Ultrasound assessment of ruptured ectopic pregnancy was made. The preoperative PCV was 20% and the result of the urine pregnancy test which came out after the laparotomy was negative.

Exploratory laparotomy was done immediately and revealed intraperitoneal haemorrhage of about 900ml. Two units of blood was transfused. The uterus tubes and left ovary were all normal. There was active bleeding from the right ovary which suggested an intraoperative diagnosis of ?ovarian ectopic pregnancy. She had a right Oophorectomy. Histology result showed ruptured corpus luteum cyst. Her postoperative period was uneventful and so she was discharged on the fifth post operative day.

## **Discussion**

Ruptured corpus luteum cyst presenting with massive intraperitoneal haemorrhage is seldom seen in clinical practice<sup>3</sup>. The cysts are commonly asymptomatic or present with mild lower abdominal pain. When the presentation is dramatic as in the case presented, the differential diagnosis will include ruptured tubal ectopic pregnancy or ovarian pregnancy<sup>4,5</sup>. Hallat<sup>6</sup>, showed from his study of 25 cases of ovarian pregnancy that the most significant finding was the inability to distinguish an ovarian pregnancy from a haemorrhagic ovary or ruptured corpus luteum and that the correct diagnosis was made clinically only in 28% of cases. His finding may hold true in many cases but in the index case, if the last normal menstrual period of two weeks prior to presentation was carefully considered, a clinical diagnosis of a ruptured corpus luteum would have been considered. More so she had similar episodes of pain relieved by analgesics two months prior to presentation. The onset of the pain which was shortly after intercourse is also suggestive of ruptured corpus luteum<sup>1,2</sup>. It has been reported that rupture of corpus luteal cyst occurs more often on the right side, during intercourse and during the later days of the menstrual cycle when the cyst are at their largest<sup>7</sup>. This picture is aptly represented by the index case. Anticoagulation therapy and coagulation deficiency have been reported in association with bleeding corpus luteum<sup>2,8</sup>. The clinical diagnosis of acute ruptured ectopic pregnancy was “confirmed” by transabdominal ultrasound scan. Although ultrasound scan especially the transvaginal is invaluable in the diagnosis of cystic ovarian lesions, it was of little help in the correct diagnosis in this case. Because of the acute nature of the presentation the white blood cell count (wbc) was not requested for. Oshri et al<sup>9</sup> showed that leukocytosis may be a feature of haemorrhagic corpus luteum.

The initial diagnosis of ruptured tubal ectopic pregnancy which was jettisoned intraoperatively for an ovarian ectopic would have been revisited at laparotomy when the spiegelberg criteria was not fulfilled<sup>5</sup>. This underscores the importance of involving the highest level of care in such delicate cases. Definitive treatment for a case of this nature is either a laparoscopy or a laparotomy. The expertise for diagnostic laparoscopy is available but not for operative laparoscopy, despite the obvious advantages of the

minimally invasive laparoscopic procedure. At laparotomy, options of management include a cystectomy, wedge resection or fulguration of the bleeding point with diathermy <sup>1</sup>. The patient had a right oophorectomy but presence of a senior colleague would have saved her ovary with its attendant health benefits.

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