East African Medical Journal Vol. 92 No. 3 March 2015
SPONTANEOUS RUPTURE OF THE CAESAREAN SECTION SCAR IN THE FIRST TRIMESTER: CASE REPORT
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SUMMARY

First trimester rupture of uterine scar in pregnancy is an extremely rare event and can confound a clinician. This is especially, if there is an over reliance on diagnostics services without a high index of suspicion. This was a case of a 31 year old, Para 1+0 G2, with one previous caesarian scar who presented to The Nairobi Hospital with acute onset of abdominal pains at 12 weeks of gestation. An ultrasound done showed moderate amount of fluid in the abdominal cavity with an intra-uterine pregnancy. Subsequently a laparoscopic evaluation was done and revealed ruptured uterus through the previous scar. A decision to convert to laparotomy was made, products of conception evacuated, uterine rupture repaired in layers and abdominal cavity closed. The post-operative period was uneventful and the patient was discharged home on third post-operative day. This case report underscores the rarity and the diagnostic challenges of spontaneous rupture of caesarian section scar in the first trimester.

INTRODUCTION

Spontaneous rupture of the caesarean scar of the uterus during the first trimester is a rare event in pregnancy. This condition is commonly seen in the third trimester, following vaginal delivery especially with non-judicious use of uterine stimulants in patients with previous caesarean history. First trimester ruptures pose a diagnosticchallenge and a high index of suspicion is needed for timely management to avert maternal morbidity and mortality.

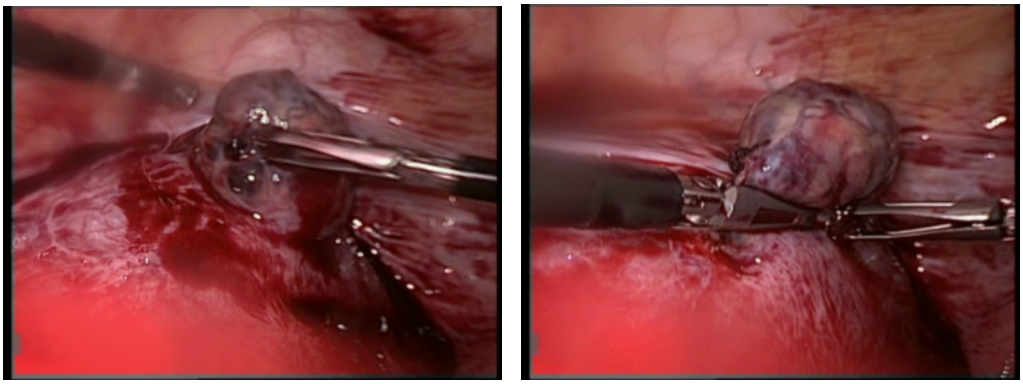
CASE REPORT

We present a case of a Para 1 + 0 G2, at twelve weeks gestation, with one previous caesarean scar. The previous scar was secondary to emergency caesarean delivery done at 27 weeks of gestation in 2011 due to severe pre-eclampsia. From patient' records, the previous scar was a Lower uterine segment incision repaired in two layers as per recommendation, with an uneventful post-operative period and recovery.

In the case we are presenting, the patient presented to the Nairobi Hospital in November 2014, with a history of acute severe abdominal pains, initially localised in the suprapubic area and progressed to generalised abdominal pains. She did not report any history of per vaginal discharge, per vaginal bleeding, straining, sexual activity or trauma. On admission, her vital signs were within normal ranges, no pallor, no jaundice and no signs of shock. An abdominal examination revealed generalised abdominal tenderness with associated rebound tenderness and a slightly distended abdomen. An abdominal pelvic ultrasound showed intra-uterine pregnancy, with moderate fluid seen in the peritoneal cavity. This scan was not conclusive and a repeat pelvic scan was done by a senior radiologist who suggested a possibility of a heterotropic pregnancy or ruptured corpus luteum cyst. Total blood count, creatinine, urea, and liver function tests were all within normal ranges.

A decision to perform diagnostic laparoscopy was made in view of the inconclusive clinical and radiological diagnosis. A haemoperitonuem of 800ml was found during laparoscopy, the tubes and ovaries were normal. A rupture through the previous scar was noted during laparoscopy (Figure 1). A decision to convert to an open laparotomy was made.

Figure 1
Protruding mass through the uterine rupture as seen during laparoscopy



A repeat pfannenstiel incision was made at laparotomy to open the abdominal cavity. A dehiscence of the uterine wall with placenta protruding approximately 3 cm along the lower segment uterine scar site was found. The products of conception and foetus were evacuated by suction curettage of uterine cavity. The site of dehiscence was freshened and closed in layers. Abdominal cavity lavage was done and a few adhesions in the pelvic area were noted. The abdominal cavity was closed in layers wound dressed. The patient successfully reversed. Products of conception were sent for histology. Histology result ruled out molar pregnancy. Counselling on the need for early ultrasound monitoring and caesarean delivery in later pregnancies was done. The post-operative period was uneventful and the patient was discharged on third post-operative day.

DISCUSSION

First trimester rupture of uterine scar in pregnancy is an extremely rare event and can confound a clinician. This is especially if there is an over reliance on diagnostics services without high index of suspicion and clinical acumen. The case presented illustrates the importance of diagnostic laparoscopy in solving a diagnostic dilemma (1), and the need to consider a differential diagnosis of uterine rupture as a cause of acute abdomen in the first trimester in women with previous caesarian scars. Spontaneous rupture of the caesarean scar is most commonly seen in the last trimester, the most common cause being attempted vaginal delivery especially with non-judicious use of uterine stimulants in patients with previous caesarean history. Incidence of third trimester rupture is 1 in 15,000 deliveries, and even rarer in first trimester (2).

Rupture through a previous lower uterine segment is common in the third trimester while rupture through a classical scar is common in the first trimester(3). Other risk factors for uterine rupture include placenta previa, placenta accreta, high parity, advanced maternal age,history of endometriosis, uterine anomalies, dilatation and curettage, myomectomy, gestational trophoblastic diseaseand irradiation(4-6).

This case report underscores the importance of high index of suspicion for uterine rupture in a case of previous caesarean scar with acute abdomen and fluid collection in the abdominal cavity regardless of gestation. In addition, laparoscopy which safe in the pregnancy including the first trimester (7-9) should be included in the diagnostic work up in patient' which such presentations for timely management to avert morbidity and mortality (10).

In conclusion, a high index of suspicion is needed to diagnose uterine rupture in the first trimester in women with previous caesarean scars. Diagnostic laparoscopy is invaluable in making a diagnosis.

ACKNOWLEDGEMENT

The Theatre and the Ward staff of the Nairobi Hospital who were involved in the management of the patient.

REFERENCES

1. Park YJ, Ryu KY, Lee JI. Spontaneous uterine rupture in the first trimester: A case report. *Journal of Korean Med. Scie.* **20**:1079-1081
2. Sweeten KM, Graves WK, Athanassiou A. Spontaneous rupture of the unscarred uterus. *American J. of Obst. and Gyne.* 1995; **172**:1851.
3. Schrinsky DC, Benson RC. Rupture of the pregnant uterus: A review. *Obstet Gynecol Surv*. 1978; **33**: 217-232
4. EsraNurTola. Hindawi Publishing 2014. First Trimester Spontaneous Uterine Rupture in a Young Woman with Uterine Anomaly. Case Reports in Obstetrics and Gynecology Volume 2014 .
5. Smith L, Mueller P. Abdominal pain and hemoperitoneum in the gravid patient: A case report of placenta percreta. *Am J Emerg Med*. 1996;**14**:45-47

6. Liang HS, Jeng CJ, Sheen TC, *et al*. First-trimester uterine rupture form a placenta perceta. A case report. *J Reprod Med. J. Reproduction medicine* 2003: **46**: 474-478
7. Kilpatrick CC, Monga M. Approach to the acute abdomen in pregnancy. *Obstet. Gynecol. Clin. North. Am*. 2007; **34**: 389-402
8. Chohan L, Kilpatrick CC. Laparoscopy in pregnancy: a literature review. *Clin. Obstet. Gynecol.* 2009; 52: 557-569
9. Al-Fozan H, Tulandi T. Safety and risks of laparoscopy in pregnancy. *Curr. Opin. Obstet. Gynecol*. 2002; **14**: 375-379
10. S. Ijaz, A. Mahendru, and D. Sanderson Spontaneous uterine rupture during the 1st trimester: A rare but life-threatening emergency. *J. of Obstet. and Gyne.* 2011; **31**: 772-772