

East African Medical Journal Vol. 92 No. 2 February 2015

DISTINGUISHING INTRAUTERINE FOETAL DEMISE VERSUS ABDOMINAL PREGNANCY IN LOW RESOURCE SETTINGS, A CASE REPORT

A. Osoti, MBChB, MMed, MPH, Lecturer, Department of Obstetrics and Gynaecology, University of Nairobi, P.O. Box 2343-00202, Nairobi, G. N. Gwako, MBChB, MMed, Mama Lucy Kibaki Hospital, B. Liyayi, MBChB, AIC Kijabe Hospital and Z. P. Qureshi, MBBS, MMed, Department of Obstetrics and Gynaecology, University of Nairobi, P.O. Box 2343-00202, Nairobi, Kenya

Request for reprints to: Dr. Alfred Osoti, Lecturer, Department of Obstetrics and Gynaecology, University of Nairobi, P.O. Box 2343-00202, Nairobi, Kenya, Email: alfredos@uw.edu

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A. OSOTI, G. N. GWAKO, B. LIYAYI and Z. P. QURESHI

SUMMARY

Diagnosis of abdominal pregnancy always poses a clinical dilemma. Transvaginal ultrasound is the ideal radiological procedure in locating these pregnancies. However in resource limited setting, abdominal and pelvic ultrasounds can be the only available yet unreliable modalities for distinguishing intrauterine versus abdominal pregnancies. We present a case of a 36 year old para 4+0 gravida 5 who presented with foetal demise at 16 weeks of gestation. Multiple abdominal and pelvic ultrasounds showed intra uterine foetal demise for which she underwent induction. The definitive diagnosis of abdominal pregnancy was established using transcervical Foleys catheter aided abdominal-pelvic ultrasound which showed an empty uterus and a gestational sac, placenta and a 16-week foetus with no cardiac activity in the right adnexa/iliac region.

INTRODUCTION

Abdominal pregnancy, with a diagnosis of one per 402-10000 births, is an extremely rare and serious form of extra uterine gestation (1, 2). Abdominal pregnancies account for almost 1% of ectopic pregnancies (1-3). The gestational sac is implanted outside the uterus, ovaries, and fallopian tubes. The maternal mortality rate can be as high as 20% (1-4). This is primarily because of the risk of haemorrhage, disseminated intravascular coagulopathy, intestinal obstruction or entero-cutaneous fistula. The placenta can be attached to the uterine wall, bowel, mesentery, liver, spleen, bladder and broad ligaments. Accurate localisation of the placenta pre-operatively could minimise blood loss during surgery by avoiding incision into the placenta (5, 6). It is thought that abdominal pregnancy is more common in developing countries, probably because of the high frequency of pelvic inflammatory disease in these areas (2). Abdominal pregnancy is classified as primary or secondary. Sonography is considered the front-line diagnostic imaging method, with magnetic resonance imaging (MRI) serving as an adjunct in cases when sonography is equivocal (7). We report the diagnosis abdominal pregnancy

in a patient who presented with foetal demise at 16 weeks gestation.

CASE PRESENTATION

The patient was a 36 year old para 4+0 gravida 5 who was not sure of her last menstrual period. She was HIV positive on highly active antiretroviral therapy. She came in to the acute obstetrics and gynaecology ward of AIC Kijabe Hospital as a referral from a peripheral HIV-care clinic. She presented with a one week history of per vaginal bleeding, mild non radiating lower abdominal pains and a positive pregnancy test. On examination she was found to be in good general condition, not pale, with a blood pressure 110/60 mmhg and pulse rate of 80 beats per minute. Abdominal examination revealed a pelvic mass estimated at 16 weeks gestation. There was no tenderness, guarding, shifting dullness or fluid thrill. The cervix was central, long, firm closed and there was no active bleeding. Other systems were essentially normal.

An abdominal pelvic ultrasound done on admission showed an intrauterine gestation at 16 weeks with no cardiac activity, and no free peritoneal fluid.

A decision was made to initiate medical uterine evacuation using vaginal misoprostol as per the World Health Organisation protocol. The first dose of 200mcg did not elicit any cervical changes or uterine contractions hence the subsequent doses were doubled to 400 mcg and she received a total of 4 doses. However, this also did not elicit any response. At this point a diagnosis of extra uterine pregnancy was suspected. A repeat abdominal pelvic ultrasound confirmed the initial findings. A trans-vaginal ultrasound scan (TVS) was not performed due to a missing TVS probe. An MRI scan was not done due to unavailability of this imaging modality and financial constraints. Therefore, a decision was

made to insert a trans-cervical Foley catheter to locate the pregnancy and initiate prostaglandin F2 alpha if the third abdominal pelvic ultrasound confirmed intra uterine foetal demise. Using a sterile technique, we placed a size 16 trans-cervical Foley catheter and ballooned with 30 cc of normal saline. A repeat abdominal-pelvic ultrasound with the Foley catheter in situ showed an empty uterus and a gestational sac, placenta and a 16-week foetus with no cardiac activity in the right adnexa/iliac region. There was no free pelvic fluid and the rest of the abdominal and pelvic organs were normal, (see Figure 1). Thus, the preoperative diagnosis of extra uterine, likely, abdominal pregnancy was established.

Figure 1

Ultrasound findings with Foleys catheter in situ



Emergency laparotomy was done under spinal anaesthesia through a pfannenstiell incision. Intraoperatively the ovaries and fallopian tubes were grossly normal; the uterus was bulky but empty. The foetus in an intact gestational sac was found in the right iliac region, with the placenta slightly adherent to the ascending colon. There was minimal haemoperitoneum. (See Figure 2). The foetus and placenta were extracted with minimal difficulty and haemostasis was achieved. Peritoneal lavage

was done and the abdomen closed in layers. The estimated blood loss was 400 mls. The pathology report showed a foetus weighing 235 g with a crown rump length of 10.5 cm, normal external features, three vessel umbilical cord and a placenta with two thirds hemorrhagic infarction. The post-operative period was unremarkable. The patient was discharged home on the third post-operative day in stable condition. She was reviewed after two and six weeks and was found to be in stable condition.

Figure 2

Intra-operative findings of a bulky empty uterus and a fetus/placenta in the right iliac region



DISCUSSION

Abdominal pregnancy is a rare event, with an incidence of 1 in 402 pregnancies in developing countries and 1 in 10000 pregnancies in developed countries (1, 2, 3). It occurs either as a result of tubal abortion or rupture (secondary) or, more rarely, as a direct implantation on the peritoneum (primary) (8).

The risk factors for abdominal pregnancy include tubal damage, pelvic inflammatory disease, endometriosis, assisted reproductive techniques and multiparity(3).

Patients with abdominal pregnancy often present with abdominal pain, nausea, vomiting, painful foetal movements, and less frequently, vaginal bleeding (1-3). However in the present case the patient had mild discomfort in the lower abdomen making the initial diagnosis difficult.

Diagnosing an abdominal pregnancy is not always easy. Fifty percent of diagnoses are erroneous (9, 10) and only 40% of abdominal pregnancies are diagnosed before surgery. The diagnosis is made on the basis of history, physical examination and imaging. Occasionally abdominal pregnancies have been diagnosed after failed induction (11) of a supposedly intrauterine foetal demise as happened in the current case. Ultrasound examination is the usual diagnostic procedure of choice, but the findings are sometimes questionable. They are dependent on the examiner's experience and the quality of the ultrasound. Transvaginal ultrasound is superior to trans-abdominal ultrasound in the evaluation of extra uterine pregnancy since it allows a better evaluation of the adnexa and uterine cavity. Echographic evidence of a non-gravid uterus alongside a foetus

is diagnostic. When there is suspicion of abdominal pregnancy and the ultrasound findings are equivocal an MRI scan should be done to provide additional information (8). However, in our set up, due to the unavailability and the prohibitive cost of an MRI scan the insertion of a balloon catheter in the uterus during ultrasound helped confirm the diagnosis. There are no published studies or guidelines on the use of a transcervical Foleys catheter for diagnosis of extra uterine especially abdominal pregnancy. However this case report illustrates the potential of transcervical Foley catheter as an alternative to TVS in suspected cases of extra uterine or abdominal pregnancy.

In conclusion, transvaginal ultrasound scanning and MRI are useful in diagnosis of extra uterine or abdominal pregnancy. In a low resource setting where these are not readily available or where the cost is prohibitive Foley catheter-aided trans-abdominal ultrasound can aid in the diagnosis.

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