# FAILED INDUCTION IN A RUDIMENTARY HORN OF UTERUS WITH SACCULATION: A CASE REPORT

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## ABSTRACT
Pregnancy in a non-communicating horn of the uterus, though rare should always be suspected in cases of failed ripening/induction of labour. This case revealed the significant morbidity that such patients may go through in vain attempts to deliver them vaginally. Despite the repeat Ultrasound scan and Doppler interrogation, the fact that the foetus was in a blind uterine horn was missed. This can be avoided by using Magnetic Resonance Imaging (MRI). She eventually had lower segment caesarean section (LSCS) and later re-exploration, perforation of uterine septum due to clot retention as well as massive blood transfusion before she could recover fully.

## INTRODUCTION

Pregnancy in a non-communicating uterine horn mimicking incarceration with sacculation of the uterus is very rare [1, 4, 6, 7]. The rate of its occurrence has been estimated to be 1 in 30, 000 pregnancies [7]. This condition is even more serious than that of sacculation of an incarcerated retroflexed gravid uterus in that it could be complicated by sudden perforation and haemorrhage [1,2].

The condition is also difficult to diagnose preoperatively due to its obscure clinical presentation [5, 8]. Correct diagnosis is often made at laparotomy perhaps following a failed induction of labour [7, 8]. There is paucity of reported cases in Nigeria and figures on prevalence and incidence are unknown. We report the presentation in a nulliparous Nigerian female at 32 weeks gestation, who had exploratory laparotomy and caesarean section.

## CASE REPORT

Mrs R.T. is a 35year old primigravida who presented at the gynaecological emergency of the University College Hospital (UCH) Ibadan at a gestational age of 32weeks and 3days with fever, easy fatigability and poor appetite of two weeks duration. She had been on admission in a private hospital for two weeks prior to her transfer to UCH. Pregnancy was booked at twelve weeks gestation in a General Hospital and had been uneventful until her previous admission. There was a background history of primary infertility of 14 years duration.

Examination revealed an ill-looking woman who was pale, afebrile (T- 37.2$^{oc}$), dehydrated with no pedal edema. Her pulse rate was 100 beats/ minute, blood pressure was 100/ 70 mmHg; Heart sounds I and II were heard, the respiratory system was normal. The abdomen was uniformly enlarged with a Lanz incision scar; the symphysio-fundal height was 36cm with generalised tenderness worse at the fundus. There was a singleton fetus in longitudinal lie with breech presentation; fetal heart tone was not heard. Vaginal examination revealed a cervix that was posterior, thick, uneffaced with a closed os, the lower uterine segment was empty. An assessment of an elderly primigravida with anaemia in pregnancy and intrauterine foetal death was made.

The haematocrit was 20 per cent, peripheral blood film showed ring forms of malaria falciparum. Electrolytes assay showed hypokalaemia (K=1.7mmol/ L) while urea and other electrolytes were normal. Retroviral screening was non-reactive and Clotting screen (PT/ PTTK), white cell count values were within normal limits. Urine culture was sterile; ultrasound revealed a dead intrauterine, breech fetus at a gestational age of 32wks and 3days; the estimated fetal weight was 2kg; it also revealed a hyperechoic mass with anechoic areas within it in the posterior aspect of the uterus but not within its wall, consistently related to the placenta tissue with similar echogenicity but was not markedly vascular on Doppler. The exact nature of the mass was

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uncertain.

The Patient was treated for malaria, had serum potassium correction and was placed on antibiotics (intravenous ciprofloxacin and metronidazole). She had 3 units of compatible blood transfused and was scheduled for cervical ripening / induction of labour with intravaginal misoprostol. The Bishop score was 3. She had 3 doses of 50µg and 3 doses of 100µg misoprostol inserted into the posterior fornix of the vagina at 6-hourly interval without response. Extrauterine pregnancy was thus suspected and a plain abdominal x-ray and a repeat USS were done that reaffirmed an intrauterine pregnancy. Cervical ripening was recommenced with 100 µg of misoprostol inserted into the posterior fornix of the vagina 6-hourly, she had another 3doses without response. She subsequently had exploratory laparotomy and findings at surgery included a bicornuate uterus with a pregnant partially ruptured right horn and an intact non-pregnant left horn (see attached figures1-3). She had a lower segment incision of the pregnant right horn and was delivered of a macerated male infant with a weight of 2.2kg, the placenta was fundal and was delivered manually; other pelvic structures were buried in adhesions. Estimated blood loss was 2850mls; she had 5units of blood transfused intra- and post-operatively.

Peurperium was complicated by fever, uterine subinvolution with retention of blood clots in the uterus associated with dropping haematocrit; fundal height was about 26weeks at 1 week postpartum. Repeat USS revealed a huge well defined mixed echogenic mass arising from the pelvis and in the abdomen, the mass was seen as posterior to the uterus with cystic and solid component measuring 13.5cm x10.6cm x11.5cm, approximate volume was 852mls.

Patient had re-exploration, findings included pelvic adhesions with an enlarged right uterine horn containing about 1,200mls of altered blood clots and these were evacuated. The left horn was intact; the cervix was only continuous with the non-pregnant left uterine horn and there was no connection between the left and right horns. After evacuating the clots the septum between the two horns of the uterus was broken down to create a link between them;

A drainage tube (size 22 FG Foley catheter) was left insitu through the cervix to the left horn and then through to the right horn. It was removed after 12days when it became inactive. She thereafter made steady progress and was allowed home on the 15th day, post re-exploration with a packed cell volume of 26%. She was seen two weeks later at the gynaecology clinic and was found to be in a satisfactory condition.

**Legends to the attached pictures**

Figure 1 – Non-pregnant left uterine horn held between the Surgeon's two fingers and the LSCS suture line.

Figure 2 – Left fallopian tube held with the left ovarian ligament.

Figure3 – Omentoperitoneal and fundal adhesions with a short loop of small bowel above the fundus.

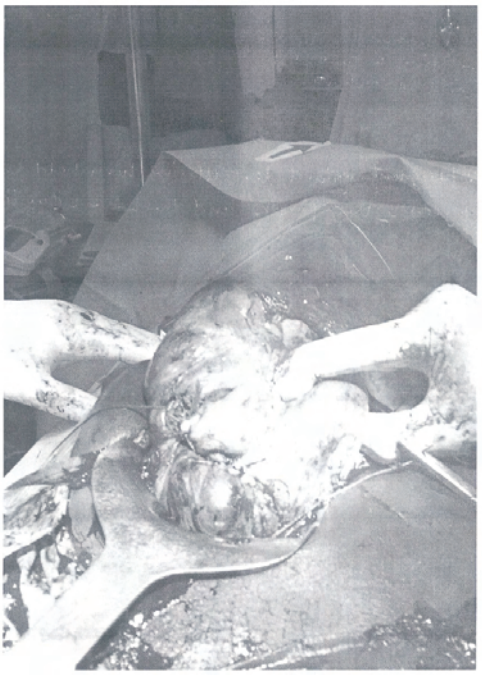

**Figure 1**

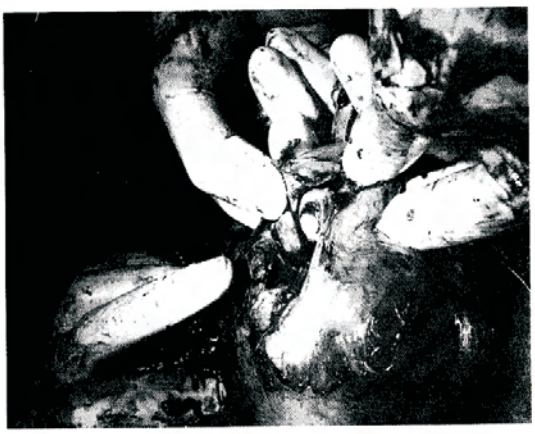

**Figure 2**

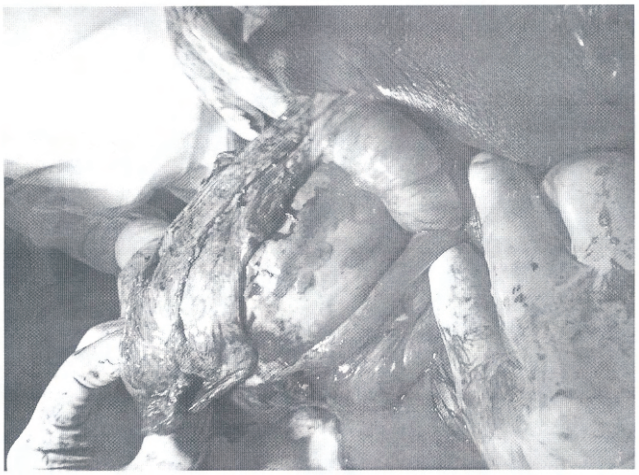

**Figure 3**

## DISCUSSION

Pregnancy in a non-communicating uterine horn is a rare condition [1, 5, 6]. The underlying pathology in these cases is a congenital mullerian abnormality leading to the development of a bicornuate uterus. In this patient the differentiation was incomplete leading to one side being a rudimentary non-communicating horn. The term "sacculation of the uterus" is used for the dilatation and thinning of the posterior part of the uterus when a retroflexed gravid uterus has partially escaped from under the promontory of the pelvis leaving a portion behind which remains a pelvic organ and distends in this situation [2]. Physical and sonographic findings are unhelpful in the differential diagnosis, as in this case, hence the timing of laparotomy is based on severity of the symptoms. However the addition of Magnetic Resonance Imaging (MRI) may be more helpful in revealing the diagnosis [7]. The unconnected rudimentary horn can become positioned in the lower pelvis causing the uterus to become displaced anteriorly mimicking classic retroversion/incarceration [5]. In this case it would seem that it was the communicating horn that was posterior and to the left. The partial rupture of the rudimentary horn containing the pregnancy could be explained by the repeated dosing with misoprostol to achieve vaginal delivery of the dead foetus in preference to performing caesarean section in the circumstances.

The presentation of this case is typical [1, 6, 8]. There was breech presentation of a dead fetus with relatively empty lower uterine pole. The patient had anaemia although this could have been due to severe plasmodium falciparum infection. The malaria could also have contributed to the death of the fetus in-utero.

The laparotomy findings revealed severe pelvic adhesions which may have been the cause of the longstanding history of primary infertility. The caesarean section was performed on the non-communicating horn leading to massive clot retention postoperatively which added to the morbidity. This is why it is important in such cases to dilate the cervix with a finger introduced from above to ensure drainage (and communication with the cervix) in these cases. This prevents the kind of postoperative morbidity that our patient went through.

The patient received a total of 10 units of Blood throughout her stay but had a steady recovery following the creation of an "artificial" communication between the pregnant and the non-pregnant horns and the exterior using a Foley catheter.

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