

The value of early trimester ultrasound scanning: a case of congenital malformation from Kibaha, Tanzania

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A case report of a mother presenting at 25 weeks pregnancy. An ultrasound scan suggested the size of the foetus to be about 32 weeks with indications of a malformation and hydrops foetalis. A balloon catheter followed by misoprostol given vaginally was used but labour did not progress satisfactorily. A Caesarean Section was carried out and confirmed the congenital abnormalities. The value of early obstetric ultrasonography is discussed.

Keywords: Early trimester sonography, foetal congenital anomaly, induction of labour, intracervical balloon catheter, misoprostol, Caesarian Section

INTRODUCTION

Early detection of congenital malformation using ultrasound among pregnant women living in low and medium limited-resource countries is uncommon ^[1]. Ultrasonography screening during antenatal visits has been observed to be important in the early detection of abnormalities and hence the need to plan appropriate management strategies ^[2,3,4]. This case report highlights the need to have at least one early trimester ultrasonographic examination.

CASE REPORT

The patient was admitted to Tumbi Regional Referral Hospital, Kibaha, Tanzania on 10 February 2016. She was 33 years old and was a G5P3+1 L3 with a history of one Caesarean Section in her third pregnancy for oblique lie. Her last menstrual period indicated that she was at 25 weeks gestational age and her 'prevention of mother to child transmission' (PMTCT) status was Two (which means she was HIV-negative tested) and her blood group was AB Rhesus positive.

On admission she complained of lower abdominal pain and a vaginal mucoid discharge stained with blood suggesting that she was already miscarrying. No ultrasound scan was done when she had attended the antenatal clinic on two previous occasions. Her general physical condition was good and she was not pale (Hb 12.5g/dl). The fundal

height approximated to 32 weeks gestation. Foetal heart sounds were not heard. The cervix was posteriorly located, shortened and allowed the passage of a tip of a finger.

Because of the absence of foetal heart sounds and the large-for-dates gravid uterus an ultrasound scan was carried out and showed a single foetus in a cephalic presentation with a biparietal diameter of 25 weeks. However, the head of the foetus was surrounded by fluid in the subcutaneous layer making the head appear very big. The foetal abdomen also appeared to be surrounded by fluid. Some cardiac activity was noted, the placenta was located anteriorly. There was normal amniotic fluid. It was concluded that there was hydrops foetalis with multiple congenital anomalies of the live foetus (see Figure 1).

The decision of mode of delivery was difficult with the risk of rupture because she had already one previous scar. Finally, the decision was reached to induce labour with a balloon intra cervical catheter which was infiltrated with approximately 70mls of water for injection. This mechanical method is good because the balloon can be deflated and removed if contractions are too strong, unlike a drug.

The balloon catheter dropped out so there had been some progress but it did not continue. Misoprostol 25ug was given vaginally every six hours for 24 hours. This was in a hospital with a theatre available in case of

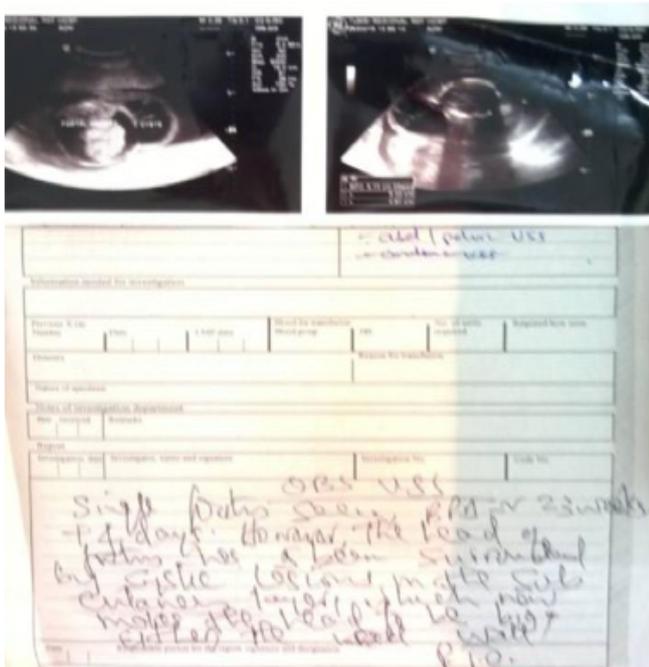


Figure 1. Ultrasound showed single foetus longitudinal in cephalic presentation with a biparietal diameter of 25 weeks and 4 days. (Credit: Naki Mfangavo)



Figure 2. The head of the foetus has been surrounded by fluid and the dilatation of the cervix has moulded the head into a point. (Credit: Naki Mfangavo)

uterine rupture, as it would not have been safe otherwise. Although there was further dilatation the head did not descend further than the pelvic brim and the cervix was swollen. After 36 hours she had a Caesarian Section done through the old Pfannestiel scar under spinal anaesthesia.

The findings were:

- Severe hydrops foetalis with a very large head and neck fused together. The mouth and nose were not patent. The eyes were small. The gender was not differentiated. The foetus died immediately after taking one breath. Birth weight 2.7 kg.
- Uterus and adnexa were normal with no retroplacental blood clot. Haemostasis was achieved and the uterus and abdominal wall were repaired in layers with the approximate blood loss of 300mls (See Figure 2).

The mother recovered satisfactorily and was discharged on the 4th postoperative day having received appropriate counselling. She failed to attend follow-up clinics.

DISCUSSION

Ultrasound scanning is a simple, affordable and non-invasive technique that should be available readily in all prenatal care services in low and middle-resource countries [5]. It should be supported by well trained personnel. This would allow the early detection of congenital anomalies and plans for more investigations and action to be made [6].

Congenital malformations are unpredictable occurring in both developed and developing countries. However in developing countries there is less availability of investigative techniques and greater ignorance about the need for surveillance during pregnancy [7]. The accuracy of diagnosing congenital abnormalities depends on having a well-skilled ultrasonographer bearing in mind that most structural problems are only seen by ultrasound in the second trimester.

Clinical diagnosis of congenital malformations is difficult without early trimester obstetric ultrasound [8]. However a definitive diagnosis often requires an invasive test as well as a scan e.g. Downs, Edwards and Patau syndromes. In our case, the congenital malformation was not discovered until the initial ultrasound was done in the late second trimester. If the ultrasound had been done earlier another management plan with a termination of pregnancy might have been possible [9]. Each country will have different health service policies and funding regarding routine ultrasound in early pregnancy as well as their own laws on abortion for women who are carrying a foetus with problems that are incompatible with life.

CONCLUSION

The accuracy of diagnosis of congenital abnormalities by ultrasound depends on the timing of the examination and on a well-skilled ultrasonographer. It is an affordable and low-risk technique and maybe should be offered to all mothers whatever the estimated gestation.

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