

EARLY NEONATAL DEATH DUE TO LIVER RUPTURE CAUSED BY MATERNAL ABDOMINAL MANIPULATION AND MASSAGE IN LABOUR

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ABSTRACT

An early neonatal death due to liver rupture caused by maternal abdominal manipulation and massage is presented. An apparently healthy baby girl was born to a 26 years old primigravida who came in the second state of labour and was delivered of her baby within eight minutes of arrival to the labour ward. Her labour lasted about 4 hours and she had gone for abdominal manipulation and massaging before coming to the hospital. Apgar score at birth was 8 recorded 9 at 5 minutes. The baby was discovered to be very pale about 10 hours after delivery, so admitted in the special care baby unit where she died shortly afterwards while being investigated. Relations were aggrieved and had accused the hospital of negligence. They wrote to the hospital to explain the circumstances of the baby's death.

An autopsy (on the body) revealed massive intro-abdominal haemorrhage resulting from a linear laceration of the right lobe of the liver. It was concluded that the massaging hands may have ruptured the baby's liver and she bled slowly and died of hypovolaemic shock ten hours later.

INTRODUCTION

Liver laceration in the newborn is not common. The liver of the newborn may be damaged during delivery with or without haemoperitoneum particularly in the preterm infant presenting by the breech. Other causes of liver trauma in the newborn include vigorous external cardiac massage and fall after delivery. In older children laceration of the liver may follow non penetrating injuries to the abdomen following road traffic accidents and falls. Mortality from liver laceration in the newborn is high due to failure of diagnosis and prompt surgical intervention^{1,2}

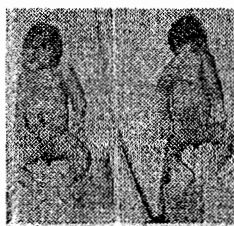
Close monitoring of the infant, in the early neonatal period is advocated to detect any abnormalities and so reduce morbidity and mortality, moreso if there be an index or reason for suspicion. Traditional medicine remains a major system of health care delivery in many developing country as in Nigeria². The case is presented to highlight this preventable and treatable cause of early neonatal death.

CASE REPORT

A 26-year-old housewife, a commercial bank staff had her antenatal care at the Braithwaite Memorial Specialist Hospital Port Harcourt, having registered at a gestational age of 18 weeks. Her labour commenced at about 1.00 a.m on the tenth of August 2,000 at 38 weeks of gestation and she came to the labour ward in second stage of labour at 5.04am. She was delivered of her baby within 8 minutes of arrival (5.12am). The baby girl weighted 3.35kg with an APGAR score of 8 at 1 minute and 9 at 5 minutes. The baby which was well covered and lying close to the mother was discovered to be very pale about 10 hours after delivery, and was taken to the special care baby unit for resuscitation but she died shortly afterwards.

On questioning, the mother said that she went on her own to perform an ultrasound scan to determine the sex of her baby and was told that the lie of her baby was transverse. She was introduced to a traditional midwife who is experienced in massage for correction of the abnormal lie of the foetus. When her labour started at home, she went elsewhere, her labour was managed for about 3 to 4 hours before coming to the hospital in the second stage of labour. Her labour lasted only 4 hours as a primigravida, blood loss at delivery was 300mls, there were no retroplacental clots. The mother maintained a stable clinical condition.

AUTOPSY FINDINGS



The autopsy performed in the mortuary of Braithwaite Memorial Specialist Hospital Port Harcourt on a day old female infant delivered by spontaneous vertex delivery to a primigravida after a 4 hours of labour. There was severe palor of the body especially the legs

Photo 1). There was no external injury on the body. On opening the abdomen, there was severe haemoperitoneum (blood volume 420ml) from a laceration on the inferior-lateral aspect of the liver with subcapsular haemorrhage (Photo 2 and 3). The other organs are essentially normal.



Photo 2

Photo 3

Discussion

Trauma to the liver may occur in infants and children due to the relatively large size of the organ and poor protection offered by the ribcage. Several causes of spontaneous rupture have been reported during pregnancy most commonly associated with traumatic pre-eclampsia⁴ in the mother.

The liver of the newborn is readily palpable about 3cm below the costal margin in the midclavicular line. This relatively large liver is vulnerable to excessive trauma⁵. This type of injury may occur from abdominal massage late in pregnancy, during delivery, in preterm infants presenting by the breech, or following a vigorous external cardiac massage^{1,2}. Our case agrees with this presentation. This case is a further proof, that neonatal liver injury can escape detection and lead to sudden death.

The interval of 10 hours between birth of apparently healthy baby (APGAR Score 8 and 9) and the observation of palor subsequently suggests the tear may have occurred shortly before birth, during birth or shortly afterward, and was followed by a small bleed until the baby was exanguinated. Abdominal massage is a common practice in pregnancy and childbirth in most communities in the Niger delta region of Nigeria. This foetal injury may be unveiling one of the unrecorded causes of maternal and foetal morbidity and mortality in clinical practice. The indigenous health sector with various alternative medical services still pose a great threat to scientific medicine. The reason for the continued relevance of traditional midwifery in developing countries is its acceptability based on the culture, environment and total

health behaviour of the people⁶. There is therefore need to educate the traditional midwifery practitioners and enlighten the patients on the hazards of abdominal massage in pregnancy and childbirth.

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