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Fetal Ascites Mimicking Maternal Ovarian Tumor: A Rare Cause of Obstructed Labour

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ABSTRACT

Fetal ascites has been diagnosed more frequently these days because of routine ultrasound scanning in pregnancy. However as a cause of dystocia in labour, it is very rare. Twenty four years second gravida of 28 weeks 6 days of gestation presented to labour room with preterm obstructed labour. Abdominal examination revealed less readily palpable fetal parts and distantly localized fetal heart sounds. An urgent ultrasound showed huge maternal ovarian cyst. She then underwent emergency cesarean section; delivered a male baby with grossly distended abdomen. However, the ovaries were normal looking. Routine antenatal ultrasounds help in identifying maternal and congenital fetal anomalies. They also guide in planning the most appropriate management. Whenever fetal ascites is diagnosed antenatally, possibility of dystocia in labour should be kept in mind.

KEY WORDS

Cesarean, Fetal ascites, Ovarian tumor

INTRODUCTION

Obstructed labour, though uncommon in the western world, still prevails in low and middle income countries leading to high maternal morbidity and mortality.[1] Common causes include contracted pelvis, uterine anomalies, maternal pelvic tumors, fetal malpresentation and congenital fetal anomalies as hydrocephalus, polycystic kidneys, fetal ascites, locked twins etc.[1] Fetal ascites is being diagnosed more frequently due to introduction of routine ultrasound scanning in pregnancy.[2-5] However as a cause of dystocia in labour, the condition is still very rare.[6,7] Maternal ovarian tumors complicating labour is reportedly very low. In this paper, we aim to present a rare case of obstructed labour secondary to fetal ascites sonographically mimicking a maternal ovarian tumor.

CASE REPORTS

A 24 years second gravida from the outskirts of Palpa district presented to the labour room of Lumbini Medical College in second stage of labour at 28 weeks 6 days of gestation. With only three antenatal care (ANC) checkups in local health post, there were no prior records of ultrasound or laboratory investigations. On abdominal examination fetal parts were not easily palpable whereas fetal heart sound was distantly localised. Interestingly, digital examination revealed a soft boggy mass suspicious of placenta or maternal pelvic mass, instead of fetal presenting part.

An emergency ultrasound revealed a single live fetus corresponding to 27 weeks 4 days gestational age with oligohydramnios and with a large cystic lesion measuring 19 centimetres x 15 centimetres compressing the fetus

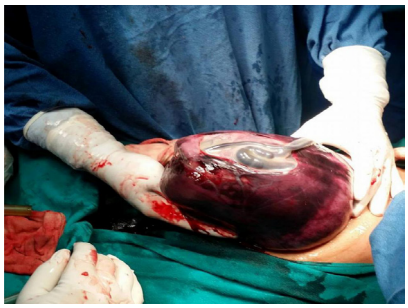

Figure 1. Enlarged fetal abdomen being delivered.

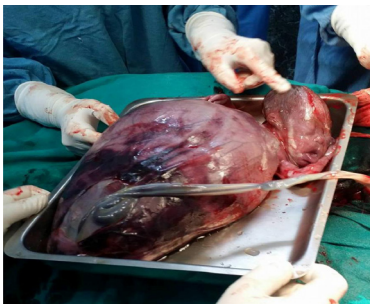

Figure 2. Baby with distended abdomen and flattened head and upper limbs

and almost filling the maternal abdomen likely maternal ovarian cyst. Her blood typing was A positive and other investigations were normal. No other risk factors as polyhydramnios, diabetes mellitus, pre-eclampsia and anemia were present.

We explained these findings to the woman and her care takers. An informed consent was taken for cesarean section. The preoperative indication was obstructed labour due to maternal ovarian cyst. Intraoperatively, a loop of flattened umbilical cord with only two vessels was noted in front of presenting part. This was followed by grossly enlarged and deformed abdominal part. It was a breech presentation. Limbs and head were flattened due to compression by enlarged abdomen. Liquor was almost absent. During delivery of the baby, clear fluid leaked out through the site of umbilical cord insertion. Bilaterally tubes and ovaries were normal looking. Thus delivered male baby which weighed 3000 grams along with placenta died in half an hour. The post operative period was uneventful. She was discharged on hematinics after five days of hospital stay.

DISCUSSION

Isolated fetal ascites is a relatively uncommon pathology. It usually presents as one of the components in fetal hydrops with reported incidence ranging from 1:2500 to 1:3748.[8-11] Although isoimmunisation stands out as a major etiology non-immunologic factors associated with fetal anomalies such as gastrointestinal genitourinary and cardiovascular anomalies do account for a substantial number of fetal ascites.[3,9,11-14] It is also associated with infections chromosomal and neoplastic disorders.[3,9,11,14-17] Fetal ascites is however a relatively rare culprit for obstructed labour. With such a numerous underlying causes, fetal ascites demands an exhausting array of investigations to pinpoint the etiology. However, apart from a negative toxoplasma, rubella, cytomegalovirus and herpes (TORCH) screen and normal routine antenatal blood parameters, other relevant investigations as chromosomal studies were not carried out in our case. As the tests were costly and not easily available, the parents were reluctant to go for further tests.

The presence of only two umbilical vessels in our case hinted towards the possibility of other anomalies alike. The general physical examination however did not reveal any gross congenital anomalies except for the flattening of limbs and head secondary to compressive effects. A thorough postmortem examination in such cases could uncover other related pathologies. Though not consented in this case, it should be undertaken whenever allowed.

Owing to routine ultrasound screening during pregnancy, undiagnosed fetal ascites in labour is a rarity these days. But in developing countries the scenario is still different. Many hail from rural areas with no or few ANC visits and attend health institutions only when labour sets in or gets obstructed. This case also belonged to a remote area with substandard ANC check up. Because of the lack of antenatal ultrasound, fetal ascites escaped diagnosis till it complicated the labour. Prior knowledge of this significant finding could have completely changed the line of management. Only predelivery diagnosis of fetal ascites can help in avoiding or recognising the hazard of dystocia in time.[18]

Fetal ascites carries an ominous prognosis with mortality almost approaching all.[10,11] It has a low recurrence rate varying from negligible to 25% in cases with specific modes of inheritance.[9]

Certain maternal characteristics as polyhydramnios, diabetes mellitus, pre-eclampsia and anemia are considered as good indices for suspicion of fetal ascites. However none of these risk factors were present in our case. A proportion of patients presents with antepartum hemorrhage, malpresentation and preterm labour.[10,18] This case also landed up in preterm labour with breech presentation. Overdistention of the uterus leading to premature onset of labour may be a possible explanation for preterm labour.

The diagnosis of fetal ascites depends on a high degree of clinical judgement and is confirmed by ultrasonographic evaluation which is the most reliable diagnostic tool.[3,9,11,19] However, as our case landed up in second stage of labour, the natural distortion of pelvic anatomy due to labour and the limited time available for the emergency ultrasonography because of the very urgency of the case itself might have led to the radiological misinterpretation as maternal ovarian tumor. Though rare, fetal ascites can sometimes mimic ovarian tumors. Had fetal ascites been timely diagnosed, it would have opened an entirely different line of management. Intrapartum transabdominal fetal ascites tapping with subsequent collapse of distended

fetal parts could be attempted thereby achieving a vaginal delivery.[1] Cesarean delivery along with its morbidities for a malformed non-viable baby could thus be avoided. However given the sonographic findings in the setting of obstructed labour in this case, cesarean section done seems fairly justified. But otherwise, seeking a second opinion in doubtful cases and keeping an open mind for possibilities in elective cases would certainly avoid unnecessary interventions.

This is a rare case of fetal ascites mimicking maternal ovarian cyst which presented with preterm obstructed labour. The antepartum or intrapartum diagnosis of fetal ascites depends largely on sonographic findings rather than the clinical. In order to avoid future recurrence, it requires a detailed work up to identify the possible recurrent etiology. Although rare, fetal ascites can sometimes be mistaken for maternal ovarian cysts. So this case emphasizes the utmost importance of routine laboratory and ultrasonographic investigations while visiting for ANC check up. The diagnosis of high risk factors or fetal congenital anomalies plays a pivotal role in outlining the most appropriate management plan. Whenever diagnosed in time, transabdominal fetal ascites tapping should always be considered a viable option thus facilitating successful vaginal delivery.

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