

Neglected Shoulder Presentation with Hand Prolapse: A Rare and Fatal Obstetric Complication Managed in a Rural Hospital

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ABSTRACT

In the era of modern obstetric care, the neglected shoulder presentation is usually limited in developing countries which increase the risk of the morbidity and mortality of both mother and fetus. In the past, the reports about obstetric management of this serious complication were very few. In this case report, we aim to describe the neglected shoulder presentation at term pregnancy that caused fetal death and discuss management options for this rare obstetric complication during labor.

Keywords: *decapitation; fetal death; hand prolapse; internal podalic version; shoulder presentation.*

INTRODUCTION

Stillbirth is a common problem worldwide especially in the developing countries. Perinatal mortality rates are over 60 per 1000 births in some low-income countries.¹ Intrapartum stillbirths account for nearly a quarter of all fetal deaths.² Although fetal distress, placental abruption, malpresentations and umbilical cord malformations are the main causes of intrapartum stillbirths in term fetuses, several of these complications cannot be predicted during prenatal care.^{3,4} Prolonged and obstructed labor, constant and intractable abdominal pain, maternal bleeding and abnormal fetal heart rate pattern are some of the signs of these complications in the antenatal period. An immediate caesarean section is the most common lifesaving treatment for the fetus and the mother in majority of cases.^{5,6}

A transverse fetal position occurs approximately in one out of 300 deliveries.^{7,8} A neglected shoulder presentation or transverse lie generally refers to the series of complications that arise out of a shoulder presentation which has remained untreated for many hours of active labour. In

this situation, the shoulder becomes wedged and impacted into the pelvis and the arm frequently prolapses through the vagina, becoming swollen and cyanosed. The major maternal and fetal risk factors for shoulder presentation during delivery include abnormalities of the uterus (bicornuate or septate), leiomyomas and large pelvic masses, anatomic abnormalities of the pelvis, weakness of abdominal muscles, multifetal gestations, prematurity, intrauterine fetal demise (IUID), polyhydramnios, placenta previa etc. In this condition, the fetal shoulder is impacted with the prolapsed arm, amniotic fluid is drained, uterus might be contracted, and the fetus is severely distressed or dead. A premature fetus may still go on to deliver spontaneously (fetus conduplicatus), but with larger babies this is not possible and with time the uterus becomes atonic and septic. In some women, the uterus continues to contract strongly and the lower segment finally ruptures leading to dehydration, keto-acidosis, shock and sepsis.

With proper intrapartum care, this condition is completely avoidable. Unfortunately, the neglected shoulder presentation is usually observed in

developing countries and is associated with increased risk of fetomaternal morbidity and mortality.⁹ In this case report, we aimed at describing the neglected shoulder presentation at term pregnancy that caused fetal death and discussing management options for this rare obstetric complication during labor.

CASE REPORT

A 19-year-old, multiparous (G2, P1) woman was airlifted from Humla district hospital to KAHS teaching hospital at 39+2 weeks of gestation with history of labor pain and hand prolapse with IUFD. The labor had begun at home 24 hours prior to presentation with rupture of membranes. Duration of time from hand prolapse to hospital admission was approximately 12 hours. The patient did not receive any prenatal care during pregnancy. Her past medical and surgical history was not significant.

On physical examination, she looked anxious, dehydrated and in constant pain. Her blood pressure was 90/60mmHg and her pulse was 120bpm. Examination of abdomen showed 38 weeks size uterus with frequent contraction. Vaginal examination showed prolapsed right hand which was cyanosed and massively swollen and was seen outside of the vagina. Cord pulsation was absent and cervical dilatation was 9 cm. Ultrasound examination showed absent fetal heart activity and nil liquor.

Neglected shoulder presentation with fetal demise was diagnosed and was taken up to operating room. Halothane inhalation was given to relax the uterus and an attempt to deliver the dead fetus by using internal podalic version and breech extraction was made, but this manipulation was inefficient. Decapitation was not chosen as a treatment option due to lack of proper instruments and the clinician's insufficient experience for this aggressive operation. Consequently, a caesarean section with lower segment incision was performed and 2800 gm. male, dead fetus was delivered. Bicornute anomalous uterus with the fetus in right cornu was noticed surgery. Prophylactic broad-spectrum antibiotics were used to prevent uterine septicemia. No complications were recorded during the intraoperative and postoperative

periods. The woman was discharged seven days after the operation as per hospital protocol without any complication.



Figure 1. Neglected shoulder presentation at term pregnancy with intrauterine fetal demise. Cyanosed and prolapsed right fetal arm was seen outside of the vagina.

DISCUSSION

In modern obstetrics, fetal viability, fetal size, umbilical cord prolapse, previous caesarean section, rupture of the uterus and experience of the clinician are the most important factors that affect the management of fetal shoulder presentation during labor. Caesarean section, internal podalic version-breech extraction, and decapitation are the management modalities for neglected shoulder presentation. The viability of the fetus is the most important factor to be taken into consideration for a clinical decision.¹⁰

Internal podalic version followed by breech extraction under intravenous Nitroglycerine of Halothane to relax the uterus is the first option for small and nonviable fetuses. However, this procedure is associated with possible serious complications like uterine rupture, bladder injury, and gross perineal lacerations. A high risk of uterine rupture is related to the thinning of the low uterine segment during prolonged labor. Therefore, the low uterine segment should be examined cautiously after delivery to rule out a possible rupture of the uterus.¹⁰ In our case, the obstetrician tried to manipulate the fetus by using the internal podalic version as a first step but was not successful.

Decapitation could be preferred as a modality of treatment in dead fetuses for decreasing the

surgical risks associated with caesarean section following prolonged labor. However, decapitation is an aggressive and radical procedure that could induce several injuries in genital and perineal organs such as uterus, bladder, cervix, and vagina and should be done by experienced obstetrician using proper instruments.¹⁰

If above mentioned procedures fail, caesarean section is the next step and last treatment option. If the baby is viable, this procedure must be preferred immediately. Some obstetricians concluded that a caesarean section following prolonged labor is associated with several intraoperative and postoperative complications. The large size of the dead fetus, bicornuate anomalous uterus with difficulty in grasping the foot, absent of liquor and less experience of the clinician on decapitation were the major factors that affected the obstetrician's decision in the present case. Prophylactic broad-spectrum antibiotic must be given to prevent septicemia which may result in infertility and maternal mortality.

A neglected shoulder presentation is an extremely rare obstetric complication in developed countries; however, it is a reality in low-income parts of the world. Our tertiary care center is located in the rural and remote part of Midwestern hills of Nepal. In this low-income region, many pregnant women do not attend any antenatal clinics, deliver at home and go to the hospital only in case of emergency. This causes high rates of perinatal mortality. Therefore, clinicians who work in rural regions should be well equipped to handle such serious obstetric complications.

In cases of neglected shoulder presentation, a caesarean section should be preferred if the fetus is viable. It is also the safest approach if the obstetrician is not experienced regarding other procedures. In case of fetal death, decapitation by an experienced clinician is another choice. The clinicians should try to use the internal podalic version only in limited cases of neglected shoulder presentation.

Conflict of Interest: None

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