

Cesarean Breech Extraction For Impacted Fetal Head In Deep Pelvis After A Prolonged Obstructed Labour: A Cesarean Technique Variation

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Citation

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Abstract

Objective: To evaluate the efficiency and safety of novel cesarean delivery technique for infants with a wedged fetal head in a deep pelvis.

Methods: Cesarean delivery of infants with a wedged fetal head in the deep pelvis was performed on three women who had a trial of failed instrumental vaginal delivery. Cesarean section was carried out in a standard fashion up to uterine incision. Subsequently, a low-vertical was preferred and delivery of the infant with a fetal head impacted in the deep pelvis was conducted in a similar fashion that is employed for delivery of infants with breech presentation.

Result: Three infants weighed 4600, 4700, 4200g were delivered in a good condition as reflected by operative delivery time and Apgar scores. Lower segment tears or unintended extension was not documented in any case and incisions were limited to the lower uterine segment in all three cases.

Conclusion: Cesarean delivery of infants with a wedged fetal head in the deep pelvis may be readily achieved thorough the low-vertical incision in a similar way that is employed for cesarean delivery of infants with breech presentation

INTRODUCTION

One of the dilemma obstetricians frequently encounter is how to keep maternal and neonatal morbidity to a minimum when given a choice between difficult vaginal instrumental delivery and cesarean section, at full dilatation. The role of instrumental vaginal delivery and cesarean section in that situation has been challenged for decades and the preferred mode of delivery has moved away from instrumental vaginal delivery toward routine cesarean section due to an insufficient number of cases to adequately train residents, an insufficient number of cases for most practitioners to remain proficient and associated neonatal and maternal morbidity (1). On the other hand, it is incorrect to assume that cesarean section provides a guarantee against maternal and neonatal morbidity, since obstetricians usually face with difficult fetal head extraction, unintended extension of incision, increased blood loss and operative delivery time in case of arrested progress at full dilatation

We describe a new technique for delivery of infant with a

wedged head in deep pelvis after a prolonged obstructed labour.

METHODS

Three grand multiparous women with the age of 36, 42, 45 years were transported to the University of Harran School of Medicine after trial of failed instrumental vaginal delivery. All three had been in labour for more than 12 hours and had pushed for just over 2 hours. Same examiner had detected no progress in descent over the last hour despite adequate uterine activity and maternal pushing efforts in all case. The indicated vacuum cup extraction in these cases had been attempted for significant fetal distress. There were no unusual antenatal complications in these three women except for one who was a noncompliant insulin-dependent diabetic patient. All were at term, and the pregnancies were not post dates. The fetal head was at +2 station, persistent occiput posterior in two cases and at station above +2 but head engaged, occiput posterior in the other case. There was appreciable molding of fetal head, and large caput

succedaneum in all case. One of the three infants experienced a prolonged deceleration to 60 to 70 bpm for 2 to 4 minutes, rapidly followed by a return to a normal baseline rate but without good short-term and long-term variability. The heart rate of the others was 140 to 160 bpm with normal beat-to-beat variability and moderate variable decelerations with each pushing effort.

PROCEDURE

Immediately before or/and during the cesarean section, the head was attempted to dislodge by use of constant but firm pressure with the palm of the right hand while the posterior vaginal wall was depressed with the left hand by an assistant but this was not successful probably because of rather tightly wedged fetal head in the deep pelvis. Cesarean section was carried out in a standard fashion up to the point of uterine incision at which the low vertical uterine incision was chosen. The first step of our technique was to find and grasp a foot and delivery it and leg through the incision. Traction on the first foot brought the contralateral lower limb into the operative field; at this point the surgeon grasped the both feet and proceeds in a manner similar to that employed for cesarean breech extraction. All procedures were performed by the same author.

RESULTS

The infants were delivered in a good condition, with a normal Apgar scores at 1 and 5 minutes and with no injuries. In all three cases the fetal faces and abdomens were facing the anterior uterine wall with fetal back adjacent to posterior uterine wall (fetal back to maternal back). We think that this position helped us and precluded fetal parts from twisting during the process of grasping the fetal foot and extraction. If the fetal back was facing the anterior uterine wall, extraction might be slightly more difficult. Operative delivery time for infants weighed 4600, 4700, 4200g were 3, 2.5, 2.5 minutes respectively. The blood losses at the time of cesarean sections were not unusual. There were no apparent head entrapment or difficulties associated with the surgical procedure, as reflected by the operative delivery time or blood loss, which were not more than usual. There was no trauma to the lower uterine segment, bladder, vagina, and cervix Incisions were limited to the lower uterine segment and no patient required upward extension. Premature placental separation was not documented in any case. There were no maternal morbidity, and all patients left the hospital in 5 to 6 days.

DISCUSSION

The rate of cesarean delivery has increased dramatically in the decades from 1960 to 1990 and it has become the most common operation performed all over the world (2,3,4). There is ongoing need to reduce the current cesarean birth rate since several studies have documented the feasibility of achieving significant reductions on institutional cesarean rates without any increase in perinatal mortality or morbidity (5,6,7). On the other hand, in some situation where the physicians face with a failed operative vaginal delivery, there is little to gain and a lot to lose from persisting in attempt to deliver vaginally and from not doing a cesarean section. However, it must be kept also in mind that the very nature of human child birth makes it a potentially traumatic procedure for both mother and fetus not only during vaginal delivery but also during cesarean section. Contrary to the general belief, cesarean sections do not provide a guarantee against maternal and fetal injury.

After prolonged obstructed labor, the operator frequently encounters a fetal head deeply impacted in the midpelvis accompanied by a greatly elongated and thinned lower uterine segment. This can lead to difficult fetal head extraction, lower segment tears and blood loss more than usual. Under these circumstances, surgeon has two choices that may make the delivery easier. The first option is exertion of upward pressure vaginally by an assistant to lift the fetal head toward the incision. The second option is the slipping of surgeon hand deeply into the lower uterine segment between the symphysis and fetal head, and gentle elevation of fetal head with the fingers and palm through the incision, accepting the probability of lower uterine segment tears.

According to our own clinical experience, extraction of deeply impacted fetal head could not be readily achieved if the vaginal upward pressure exerted by an associate fails to dislodge the fetal head. In many instances, fetal head is compressed between surgeon hand and pelvic bones and the manipulation of the fetal head, which is necessary during delivery, combined with the thinning of the lower uterine segment, result in a lateral extension of a transverse incision, lower uterine segment tears and laceration of the uterine vessel. It is important to know that smooth, gentle delivery of fetal head is needed for good maternal and neonatal outcome even if additional time for the delivery is required. It was reported that those neonates who had a difficult extraction requiring 3 minutes from time of uterine incision

to delivery did not have different outcomes compared with those delivered in <3 minutes (8). In the present study, by using our own technique, infants weighing more than 4000g were easily delivered without any difficulty, as reflected by good Apgar scores and operative delivery time which were less than 3 minutes in all cases.

The probability of lower segment tears and unintentional extension is related to the progression of labour at surgery, with the highest incidence in women undergoing operation during the second stage of labor and difficulty in disengaging the fetal head from the pelvis (8). In the present study with this technique, we have not encounter lower segment tears or unintentional extension and the incisions were confined to the lower uterine segment despite the fact that the cesarean sections were performed during the second stage of labour

We have preferred low-vertical incision to low-transverse incision, because it might not be possible to successfully grasp the fetal feet and effect delivery through a low-transverse incision without risking trauma to the either the uterus or the fetus. Although the choice of low-vertical incision may be considered as a disadvantage of the present technique, it appeared that patients with low-vertical scars confined to the lower uterine segment has a same risk of scar separation which is not different from those patients laboring with a prior low- transverse incision (9). Extension of the vertical incision is less hazardous to the patient than extension of the transverse incision and this may be extended upward so that in those circumstances where much more room is needed (10).

CONCLUSIONS

In a conclusion, delivery of an infant with a wedged fetal head in deep pelvis may be readily achieved thorough the

low-vertical incision in a manner similar to that employed for cesarean breech extraction. However, it needs to be emphasized that the technique should be considered if the vaginal upward pressure exerted by an associate fails to dislodge the fetal head and the continued persistence at vaginal manipulation will only lead a predictably poor outcome for all concerned.

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