

Role Of Internal Podalic Version In Developing Countries

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Abstract

Objective: To study the role of internal podalic version in the management of undiagnosed transverse lie in labour in developing countries and its place in the management of 2nd twin.

Materials and methods: This is a retrospective case series study of 41 cases of internal podalic version from January 1997 to August 2002. The data was collected from the labour ward register and was analysed.

Main outcome measures: The primary outcome was analysis of the indications of internal podalic version in developing countries. The secondary outcome was to assess the success and outcome of version and the factors affecting the success of this almost lost art by analysing these cases.

Results: There were 41 (15.8%) cases of internal podalic version out of 261 cases of transverse lie. All these cases were undiagnosed transverse lie with intrauterine fetal death in labour. None of these cases had any form of antenatal care. Half of the cases were more than 37 weeks gestation. 31 (76%) cases were with >7cm cervical dilatation. Version resulted into minor complications like 5 cases of cervical tears, 7 cases of para- urethral and vaginal tears. No case of rupture uterus or obstetric shock was reported. There were 2 cases of failure of version one of which was followed by LSCS and the other by vaginal birth following reductive surgery. There was one maternal mortality which was due to the eclampsia and not related to the internal podalic version.

Conclusions: The success rate of IPV is good if it is done by competent and experienced operator and when prerequisites are satisfied. This can prevent a scar on the uterus and subsequent scar rupture for a mother who lives miles away from the hospital and does not have facilities to attend the antenatal clinic. When attempted, it should be abandoned in case of early signs of any complications like difficulty in manipulation or evidence of shock or chorio-amnionitis.

INTRODUCTION

Version is defined as a shift in the position of the fetus inside of the uterus, either occurring naturally (spontaneous version) or as performed by a doctor to facilitate delivery. In literature, various types of versions have been reported. External cephalic version is a procedure that attempts to manually turn the baby from a breech presentation to a vertex by applying external pressure on the maternal abdomen. Internal podalic version is a procedure where the accoucheur hand or fingers is inserted through the dilated cervix and one or both lower limbs of the fetus are brought down into the maternal pelvis to expedite vaginal delivery. Braxton Hicks version is an internal podalic version performed through a partially but not completely dilated cervix; for a nonviable fetus.⁽⁸⁾

Internal version is an ancient procedure and it was extensively practised by Hippocrates, who recommended internal cephalic version for all presentations other than head. Aetius, Celsus and others at different times pointed out the fallacies of Hippocratic teaching and emphasized the advantage of internal podalic version.^(1,2) Internal podalic version continued to be in favour till the sixteenth century. In modern obstetrics, caesarean section is the method of choice for the delivery of babies in transverse lie. The role of internal podalic version followed by breech extraction is limited to malpresentation or abnormal lie of the second twin in the presence of an experienced operator as in these cases the cervix has already been fully dilated. In the case of singleton transverse lie, it is contraindicated with a live fetus and intact membranes, because while the cervix may appear

fully dilated, once the procedure ruptures the membranes the uterus will clamp down on the baby and the cervix will then be found to be only 6 or 7 cm dilated with subsequent entrapment of the after coming head (3).

In the developing countries like India, the maternal mortality rate is very high and over a 100,000 women in India continues to die of pregnancy related causes every year (4). One of the major causes of rupture uterus is scarred uterus. Rupture uterus is a serious obstetric emergency with high maternal and perinatal mortality rate. The risk increases in the presence of scarred uterus, lack of adequate antenatal care, unsupervised labour at home and low socioeconomic status. Performing a caesarean section for a dead, previable baby will lead to a scarred uterus increasing her risk of having rupture uterus in the subsequent pregnancy due to the presence of other risk factors.

Internal podalic version is much maligned to produce sepsis, postpartum haemorrhage and uterine rupture, causes high fetal and maternal morbidity and mortality rates in itself.

In selected cases and in experienced hands internal podalic version is comparatively safe in the developing countries and can contribute to reducing the maternal mortality and morbidity by avoiding caesarean section and subsequent uterine rupture.(5,6,7)

AIMS

To study the role of internal podalic version in the management of undiagnosed transverse lie in labour in developing countries and its place in the management of 2nd twin by analysing the indications and associated obstetric complication. The secondary outcome was to determine the predictors of success of version by analysing the cases with respect to gestational age, cervical dilatation, birth weight, parity and the technical difficulties in version and to assess the morbidity profile and to analyse the experience of the obstetricians.

METHODOLOGY

This was a retrospective study of case series of 41 cases of internal podalic version in Sir Sayajirao General Hospital from January 1997 to August 2002. This is a tertiary referral centre in the district of Baroda in India with an active obstetric unit of 4000 deliveries per year. All the cases of internal podalic version were done in case of transverse lie. This procedure involved locating the fetal foot under analgesia either spinal or general anaesthetic and then after confirmation that it is definitely a foot by palpating the fetal

heel and then grasping it and pulling one foot followed by the other foot down into the vagina and then performing a breech extraction. The data was collected from the labour ward register which had the sociodemographic details, associated obstetric history and parity, cervical dilatation at the time of version, indications and complications of version along with details of the surgeon performing the procedure. The total number of cases of transverse lie was obtained from the calculated monthly statistics. There were 261 cases of transverse lie during this time period. The missing data about these cases was obtained by procuring the notes from the medical records.

RESULTS

There were total of 41 cases (15.8%) of internal podalic version out of the 261 cases of transverse lie that came to the hospital. Caesarean section was performed in 192 cases (73.5%) of transverse lie whereas 28 cases (10.7%) presented with rupture uterus during this period. Only one case of internal podalic version was in twin gestation.

36 cases (88%) were multipara and 5 cases (12%) were primipara.

None of them were booked cases. 20 cases (49%) were self referral as emergency cases for the first time in labour and 21 cases (51%) were referred by the nearest health care centre. Most cases (83%) were from the rural population. 21 cases (51%) were >37 weeks whereas 17 cases (42%) were 28-32 weeks of gestational age. 3 cases (7%) were between 26-28 weeks. In 21(52%) cases the birth weight was 2-3kg., in 10 (24%) cases the birth weight was less than 1.5kgs and in 9 (22%) cases the birth weight was 1.5-2kg.

40 cases were singleton pregnancies with undiagnosed transverse lie in labour of which there was obstetric complication of hand prolapse in 19 cases. One case of internal podalic version was done in case of transverse lie of the second twin, 2 in case of transverse lie with eclampsia with hepatic encephalopathy, 2 in case of grade 1 and grade 2 placenta praevia with preterm and dead fetus and one in a case of impacted 3rd degree cervical prolapse due to technical difficulty in performing caesarean section. 31(76%) cases were with >7cm cervical dilatation. The only case with cervical dilatation of 4 cm was the one with utero cervical prolapse.

There were 5 cases of cervical tears, 7 cases of para-urethral and vaginal tears. No case of rupture uterus or obstetric shock was reported. 19 (46%) cases of version were done by

obstetricians of >5 years experience, 16 (39%) cases were done by obstetricians of <3 years experience and 6 (15%) cases were done by obstetricians of experience of 3-5 years.

There were 2 cases of failure of version one of which was followed by lower segment Caesarean section and the other by vaginal birth following cleidotomy. There was one case of maternal mortality which was due to intracerebral haemorrhage from eclampsia and was not related to the internal podalic version.

DISCUSSION

Analysing the cases of transverse lie which were managed by internal podalic version, none of these 41 cases had any form of antenatal care. The 21 cases (51%) which were referred by health professionals were the ones who approached the health services however the rest 20 (40%) who self referred themselves came in with complications when they could not deliver at home. Most of the cases were from rural area. There is underutilization of health care services in the rural areas due to ignorance, cultural beliefs and social taboos. Hence due to improper antenatal care there is high incidence of undiagnosed malpresentation in labour. Moreover, due to inadequate transport facilities there is delay in approaching the tertiary health centre. Thus, these complicated, undiagnosed cases of transverse lie report to the hospital in advanced labour and by this time it is not possible to salvage their babies and even sometimes these mothers also.

In the cases of transverse lie in singleton pregnancies which presented in advanced labour with IUFD, performing internal podalic version facilitated vaginal delivery and hence prevented a Caesarean section.

In the two cases of eclampsia with hepatic encephalopathy where the mother was in coma, internal podalic version was used to deliver the fetus in favour of caesarean section. Operative intervention in form of Caesarean section would increase the risk of maternal mortality and morbidity especially with limited obstetric and high risk anaesthetic facilities.

Most of the patients who underwent attempt of internal podalic version had more than 7cm cervical dilatation where performing IPV is relatively easy and the risk of complications is very less. The only case where IPV was done at the cervical dilatation of < 7 cm was the one with uterocervical prolapse. Success of IPV in this case was due to general anaesthetic which relaxed the uterus and the

cervix as well as the low birth weight.

The 2 cases of failed version were the ones with no liquor and who had been in labour for long time and were probably in obstructed labour and hence were improperly selected cases for attempting version.

CONCLUSIONS

In earlier years internal podalic version was performed on all stillbirths, nonviable babies, second twin and in a few singleton pregnancies in which the babies were of low birth weight or were preterm. However with improved neonatal facilities today, low birth weight and preterm babies have better chance of survival. This combined with the safety of the caesarean section is the important reason for the change in the trend of delivery of babies in transverse lie. But caesarean section has implications for a mother who lives miles away from the hospital and does not have healthcare facilities with the risk of rupture of scarred uterus. (5)

Internal podalic version was performed mostly for the cases of transverse lie where the fetus was dead and the cervix was sufficiently dilated and uterus was relaxing in between the contractions. The success rate is good if it is done by competent and experienced operator and where the cases are carefully selected with no signs of obstructed labour. However with the decrease in the trend for internal podalic version, most obstetricians are not well versed in the art of successful version and many junior obstetricians have not even seen it being performed. It is difficult to compare this data with international literature and there are no references for internal podalic version for singleton pregnancies in international literature. (5)

In international literature its role is limited to the delivery of second twin only. There are no data from randomised trials to guide the choice between caesarean section, external cephalic version, or internal podalic version. However, due to good antenatal care transverse lie in labour is most commonly found with a second twin. And the cervix in these cases has already been fully dilated so that it is possible to do internal podalic version. (5)

When attempted, it should be abandoned in case of early signs of any complications in the form of maternal shock, or signs of obstructed labour. In certain cases of transverse lie where there is danger of rupture uterus, shock due to chorio-amnionitis and possibility of excessive intra uterine manipulations, it is preferable to perform a caesarean section. All cases of transverse lie should be tailored

accordingly and internal podalic version definitely has a place in developing countries.

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