

Internal Podalic Version Still Has a Role in the Management of Transverse Lie

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ABSTRACT

Aims: To analyze the cases of undiagnosed transverse lie presented in labour room of BMCH which were managed by IPV or LSCS, thus emphasizing the continuing importance of IPV in the developing countries.

Objective: To study the role of internal podalic version in the management of undiagnosed transverse lie presenting in active labour.

Study Design: Retrospective case series study

Place and Duration of Study: This study was carried out at the Department of Obstetrics and Gynecology Unit-I, Bolan Medical Complex Hospital Quetta, Baluchistan, from January 2001 to December 2012.

Materials and Methods: This is a retrospective case series study of 144 cases of transverse lie who presented in active labour. The relevant data of 11 years was collected from the labour ward register and was analyzed.

Results: There were total 144 cases of undiagnosed transverse lie that came to hospital out of which 74(51.38%) were managed by internal podalic version and cesarean section was performed in 70(48.62%) cases. None of them had any form of antenatal care. 44(30.55%) of them were 2nd twin

Conclusion: Internal podalic version still has a role in the management of transverse lie. It is almost always successful in the delivery of second twin but singleton pregnancies can also be delivered with this skill if proper patient selection is done. It has shown a good maternal and fetal outcome.

Key Words: Internal podalic version (IPV), transverse lie, cesarean section, twins, hand prolapse.

INTRODUCTION

Internal podalic version is a procedure where the accoucheur hand or fingers are 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.¹ Internal version is an ancient procedure and it was extensively practiced 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.²

Irving W.Potter, a US obstetrician practiced internal podalic version for nearly 50 years. He delivered 22,000 babies by IPV in his career. There was no maternal death. He faced a lot of criticism from his colleagues and his work was most of the time denied publication. Could another Potter practice today? ^{3, 4}

In modern obstetrics, caesarean section is the method of choice for the delivery of babies in transverse lie and internal podalic version is performed less frequently⁵, but in the developing countries like Pakistan, the maternal mortality ratio is very high and it is 276/100,000 live births. Rupture uterus is a serious obstetric emergency with high maternal and perinatal mortality rate. Performing a caesarean section for a dead, premature baby will lead to a scarred uterus increasing the risk of having ruptured uterus in the subsequent pregnancy.⁶ The risk of rupture is further increased in our circumstances due to inadequate

antenatal care, lack of education, poverty, cultural beliefs, social taboos, unsupervised labour at home and lack of health facilities. Moreover, due to inadequate transport facilities, there is delay in approaching the tertiary health centre from far areas. So internal podalic version is comparatively safe in the developing countries if performed by experienced hands and properly selected cases.^{7, 8} It can contribute to reducing the maternal mortality and morbidity by avoiding caesarean section and subsequent uterine rupture. So it has still a role in developing countries.

The role of internal podalic version (IPV) followed by breech extraction is usually limited to malpresentation or abnormal lie of the second twin in the presence of an experienced operator.⁹ Traditional teaching advises against IPV for neglected shoulder presentation because of a high risk of uterine rupture; CS or decapitation is instead advised in this situation. However, performing an unnecessary CS for a dead baby is not without risks: in the short term there is a high risk of hemorrhage and infection, and in subsequent pregnancies there is a high risk of scar rupture.¹⁰ In our hospital, therefore, we offer IPV to women for the management of neglected shoulder presentation with fetal demise or profound bradycardia to expedite delivery.¹¹

MATERIALS AND METHODS

This is a retrospective study conducted at gynae unit 1 BMCH which is a tertiary referral centre for all over the province. The relevant data over a period of 11years i.e. from 2002 to 2012 were collected from labour ward

register and was analyzed. All women who presented with transverse lie in active labour were included in the study. Age, parity, gestational age, antenatal complications, duration of labour, mode of delivery, fetal outcome, residential area along with details of surgeon performing the procedure and maternal outcome were recorded. Those who presented either in latent phase of labour or without labour having transverse lie and who refused to give consent were not included in the study. Informed consent was taken. It was performed in operation theatre under general anesthesia, except for some second twin, with the consent of cesarean section in case of failure of procedure.

RESULTS

There were total 144 cases of transverse lie that came to hospital emergency. Out of which 74(51.38%) were managed by internal podalic version and cesarean section was performed in 70(48.62%) cases. None of them was booked case. The cases on which IPV was done, six (8.1%) were primigravida, 32(43.34%) were 2nd -3rd gravida, 12(16.21%) were 4th-5th gravida and 24(32.43%) were >5th gravida (Table 1).

Most of the patients 33(33.44%) were between ages 25-30 years, 18(24.32%) were 31-35 years, 15(20.27%) were more than 35 years and eight (10.81%) were less than 25 years. (Table 2).

Table 3 shows the mode of presentation and/or associated obstetric condition and mode of delivery in which 44(30.55%) presented with handprolapse, 35(24.30%) cases with transverse lie or shoulder presentation, 44(30.55%) cases were 2nd twin (retained or transverse lie). Seven (4.86%) cases presented with ruptured uterus, one of which was retained 2nd twin. There was placenta previa type III in 3(2.08%) and cord prolapse was also present in 3(2.08%) cases. 8(5.55%) were impacted shoulder, and analyzing the Mode of delivery, maximum no of IPV were performed in singleton handprolapse 34(45.94%) and 10(13.51%) in transverse lie. IPV was done in 30(40.54%) of 2nd twin, either retained or transverse lie while cesarean section was performed mostly in transverse lie 25(37.71%), then on 2nd twin 14(20%), 8(11.42%) cesarean sections were impacted shoulder with signs of obstruction.

Table 4 shows the fetal outcome, 78(54.16%) were dead out of which IPV was done on 48(33.33%) and 66(45.83%) were alive. Out of which 26(18.05%) were managed by IPV, all of them were on 2nd twin. LSCS performed on 40(27.77%) of live fetus and 30 (20.83%) of dead fetus.

Most of babies 49(66.2%) were between birth weight of 2.1-3.0kg, 13(17.6) <2.1 kg and 12(16.2) were >3.0kg (Table 5).

56% cases of version were done by obstetrician of 3-5 years experience, 30% were done by obstetrician of

>5 years and 14% by <3 years experience, this shows that IPV not only requires skill but also the courage.

Out of 144 babies born, 104(72.22%) were males and 40(27.78%) were females.

Most of the pregnancies were term according to history. But exact gestational age could not be found as patients mostly didn't remember dates and ultrasonography was not available in late hours.

Table No.1: n= 74(IPV)

Parity	No of cases	Percentage
primigravida	6	8.1
2 nd -3 rd gravida	32	43.34
4 th -5 th gravida	12	16.21
>5 th gravida	24	32.43

Table No.2: Age of patients n=74 (IPV)

Age in years	No of cases	Percentage
<25	8	10.81
25-30	33	33.44
31-35	18	24.32
>35	15	20.27

Table No.3: Associated obstetric complications and mode of delivery

Mode of presentation	IPV n=74	Cesarean section n=70	No of cases n=144
Handprolapse	34 (45.94%)	10 (14.28%)	44 (30.55%)
Transverse lie	10 (13.51)	25 (35.71%)	35 (24.30%)
Second Twin	30 (40.54)	14 (20%)	44 (30.55%)
Impacted shoulder	0	8 (11.42%)	8 (5.55%)
Cord prolapsed	0	3 (4.28%)	3 (2.08%)
Placenta previa	0	3 (4.28%)	3 (2.08%)
Ruptured uterus	0	7 (10%)	7 (4.86%)

Table No.4: fetal outcome n=144

Fetus	IPV	LSCS
Alive= 66(45.83%)	26 (18.05%)	40(27.77%)
Dead= 78(54.16%)	48(33.33%)	30(20.83%)

Table No.5: n=74(IPV)

Birth weight	No of cases	%
1.5-2 kg	13	17.6
2.1-3 kg	49	66.2
>3 kg	12	16.2

DISCUSSION

Analyzing the cases of undiagnosed transverse lie, none of them had any form of antenatal care and most of them were from rural areas. The cases (35%) which

were referred by health professionals were the ones who approached the health services; however the rest (65%) came with complications when they could not deliver at home. Due to improper antenatal care, lack of health services in the rural areas, preference of home delivery, there is high incidence of undiagnosed malpresentation in labour.¹² Moreover, there is delay in approaching the tertiary health care centre from far areas due to lack of conveyance facilities.

In a study by Mahendru et al,¹³ IPV was done in 41(15.8%) cases. Cesarean was done in 192(73.5%). 36(88%) were multigravidas and five (12%) were primigravidas. All were non booked patients. 21(52%) had weight of 2-3kg. In our study, cases of transverse lie which presented in advanced labour, most of them were managed by IPV (51.38%). Cesarean was done in 70(48.61%), 14(9.27%) were primigravidas and the rest were multigravidas. All of our cases were also non booked. 49(66.2%) were of 2-3 kg weight. 68(47.22%) were between the ages of 25-30 years. Our success of IPV is comparatively high and cesarean rate is low.

Chauhan AR et al¹⁴ performed IPV successfully in 25.55% cases of transverse lie. This shows that in developing countries, obstetricians still prefer IPV so avoiding giving a scar on a dead or previable fetus and saving a mother who lives miles away from the hospital and does not have health care facilities with risk of rupture of scarred uterus.

It is difficult to compare our data to international literature, since there are no references for IPV in singleton pregnancies in recent literature because they face such emergencies rarely and they have better neonatal facilities to salvage distressed babies.^{15,16,17} However in developing countries IPV still has a role to play in the delivery of distressed babies as neonatal facilities are not widely available and ironically they may not be worth a scar to mother.

Andriamady et al¹⁸ reported 177 IPV (85 in singleton pregnancies) and reported postpartum hemorrhages in 73%, uterine ruptures in 8% and cervical tears in 5% women. In our series, we had no difficulty in mobilizing fetal parts during the procedure, even though there was almost no liquor left because of prolonged rupture of membranes. If uterine relaxation is good, the accoucheur's hand can be inserted easily even up to the uterine fundus and mobilizing fetal parts becomes easy. Good uterine relaxation rather than amount of liquor is a key to successful procedure of IPV which we achieved with general anesthesia.

Internal podalic version is successfully used for second twin in transverse lie by many and mostly for the only indication.^{19,20} In our study 44(30.58%) were second twin in transverse lie. IPV was done in 30(40.54%) of cases and cesarean in 14(20%) cases. Rebufa-Dhenin E et al²¹ did cesarean on second twin in 11(4.2%) cases due to failure of IPV. According to them cesarean risk was greater when performed with ruptured membranes

and when intertwin delivery interval was increased. Kurzel RB et al²² did cesarean on second twin for two reasons namely cord prolapse in 26% and failure of IPV in 52% of cases. Piekarski P et al²³ found that IPV for second twin was associated with lower 5 minute Apgar score and risk of birth trauma compared to cesarean. Drew JH et al²⁴ did IPV in 51 twin pairs and showed that majority of infants so born did well. Robinovici J et al²⁵ considered IPV a better alternative for second twin with good neonatal outcome without birth injuries.

Gandhi MN et al²⁶ used intravenous nitroglycerine for uterine relaxation and found it to be a potent relaxant for the success of IPV. Dufour P et al²⁷ found that intravenous nitroglycerine (0.1-0.2mg per kg) induced transient and prompt uterine relaxation without affecting maternal and fetal outcome. They applied it to 20 cases of second twin in transverse lie with unruptured membranes. We attempted all IPV on singletons in general anesthesia and were mostly successful.

We could not compare the gender outcome with any study as we could not find it in any of our references. In our study 104(72.22%) were males and 40(27.78%) babies were females which may somewhat indicate a relationship of gender with transverse lie.

All cases of transverse lie should be tailored accordingly and internal podalic version definitely has a place in developing countries. Timely referral services, early diagnosis & appropriate indication with management by an experienced person can give good results in cases of transverse lie managed by IPV. Such technical skill can be taught during residency training and maintained through use in clinical practice.

CONCLUSION

IPV is much thought to cause sepsis, uterine rupture, fetal trauma and even death, postpartum hemorrhage, vaginal tear, cervical tear, bladder damage etc but in selected cases where the baby is preterm or dead, where there is sufficiency of liquor, uterus relaxes between pains and mobility of fetus is good, IPV in experienced hands is comparatively safe with no incidence of rupture uterus or maternal morbidity. We often hesitate to do Caesarean Section with dead, premature or severely distressed fetus because our patient will go back to rural area with a scar. She may not return for a follow-up. She may take a trial at home in next pregnancy and prone herself to rupture of uterus. Since the word "modern" has been attached to obstetrics, cesarean rate has risen to have a safe play. Obstetrics is a field of skills and arts like IPV, ECV, forceps, ventouse delivery etc, and skills never go out of date. We need to revive them in order to serve our community better. In underdeveloped countries we don't have better neonatal facilities, our patients don't come for follow-up and there is a trend of keeping big families. Sometimes they don't return because of the

fear of repeat cesarean which will limit their size of family. We suggest that after proper patient selection with transverse lie, we should not deprive the patient of the option of IPV. A judicious mind and experienced gentle hand is needed. Let's save the art of IPV and not the faces. Let's share the experiences on procedures that are done with success but not reported because they may not be considered modern. In obstetrics, decisions are made according to circumstances. In areas like ours, IPV is very much practical for the management of transverse lie.

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