

Original Research Article

To Study effect of external cephalic version in breech pregnancy with respect to antenatal patient admitted in M.Y. Hospital, Indore**Akanksha Thora¹, Vibhuti Thakur^{1*}, Anupama Dave², Chinmayan Goyal³**¹*Assistant Professor, Department of Obstetrics and Gynecology, M.G.M Medical College & M.Y. Hospital, Indore, Madhya Pradesh, India*²*Professor, Department of Obstetrics and Gynecology, M.G.M Medical College & M.Y. Hospital, Indore, Madhya Pradesh, India*³*Senior Resident, Department of Obstetrics and Gynecology, M.G.M Medical College & M.Y. Hospital, Indore, Madhya Pradesh, India***Received: 18-11-2020 / Revised: 30-01-2021 / Accepted: 18-02-2021****Abstract**

Background & Method: An interventional prospective study was conducted in Department of Obstetrics and Gynecology at M.G.M. Medical College and M.Y. Hospital Indore in women with breech pregnancy admitted, Minimum of 30 cases were screened by ultrasound, then presentation were confirmed. All the patients who are diagnosed with breech advised to go for USG with colour doppler at term and their follow up till they deliver were recorded. **Result:** Total number of breech admitted was 679 out of which maximum in the age group of 22-26 i.e 49.6%. Maximum number of women 407(60%) were found be unbooked and 272 (40%) of women are booked. Total no. of deliveries and breech admitted in the hospital, in study period total no. of cases delivered during the study time found to be 17,308 out of which 679 patient were breech, so incidence of breech found to be 3.9 %. Among them 30 patient give consent for ECV. **Conclusion:** It was concluded that External Cephalic Version is a valuable though under used option in the management of breech presentation at term. It is a relatively safe procedure, complications were very rare, it is simple to learn and perform. Vigilance for searching breech presentation and counselling after 36 weeks is important. A proper understanding of the risk is essential for the obstetrician to allow accurate counselling. Breech presentation is associated with higher incidence of mortality and morbidity irrespective of the route of delivery as compared to cephalic presentation. Any complications associated with breech presentation can be reduced by converting it to cephalic presentation by ECV.

Keywords: External, Cephalic, Pregnancy & Antenatal.

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Introduction

Breech presentation and delivery remains great challenge to the obstetrician. The incidence of breech presentation is related to gestational age, as 40% of fetuses present breech at 20 weeks but only 6-8% do so at 34 weeks breech presentation at term occurs in 3% to 4% of the term pregnancies[1] more common in nulliparous women and in preterm deliveries. Even if there is no underlying fetal or maternal abnormality, both mother and fetus face an increased risk of a complicated delivery.

Breech presentation, which occurs in approximately 3 percent of fetuses at term, describes the fetus whose presenting part is the buttocks and/or feet. Although most breech fetuses are normal, this presentation is associated with an increased risk for mild deformations, torticollis, and developmental dysplasia of the hip.

Following the publication of the Term Breech Trial, 2 there was a significant decrease in the number of women undergoing vaginal breech birth.[2] Overall cesarean delivery rate is higher in breech presentation at term, which is associated with a clinically significant decrease in perinatal/neonatal mortality and neonatal morbidity compared with vaginal delivery.[3] Efforts to prevent the first cesarean section often present obstetricians with the task of decreasing the number of cesarean deliveries they perform. One alternative to cesarean delivery is an external cephalic version (ECV)[4].

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Assistant Professor, Dept. of Obstetrics and Gynecology, M.G.M Medical College & M.Y. Hospital, Indore, M.P., India.

E-mail: dr.akanksha2709@gmail.com**Material & Method**

An interventional prospective study was conducted in Department of Obstetrics and Gynecology at M.G.M. Medical College and M.Y. Hospital Indore in women with breech pregnancy admitted from June 2018 to Nov 2019 (18 Months) with sample size of minimum 30 antenatal women meeting inclusion criteria during the study period.

Inclusion Criteria

- All registered pregnant women admitted in MYH Indore who are diagnosed with breech presentation at term which includes.
- Singleton pregnancy with uncomplicated breech presentation
- Term (gestational age>37 weeks)
- Uterus relaxed
- Non-Engagement
- Normal fetomaternal Doppler
- Adequate liquor
- Non-obese patient
- Without any obstetric or medical complication
- All the patients giving consent

Exclusion Criteria

- All the antenatal women who are showing risk or contraindication for external cephalic version.
- Antepartum hemorrhage (Placenta Praevia or abruption)
- Fetal causes
- Hyperextension of head
- Large fetus (>3.5 Kg)
- Congenital abnormalities
- Dead fetus
- Fetal compromise

- Multiple Pregnancy
- Ruptured Membrane
- Congenital malformation of uterus
- Abnormal cardio-topography
- Contracted pelvis
- Obstetric complication
- Severe pre-eclampsia/Eclampsia
- Bad obstetric history
- Who are not giving consent

Study Procedure

Minimum of 30 cases were screened by ultrasound, then presentation were confirmed. All the patients who are diagnosed with breech advised to go for USG with colour doppler at term and their follow up till they deliver were recorded. Patients are followed up with regular ANC including BP measurement, urine examination for albumin, weight gain and other parameters in each visit until term or till the patients deliver or after admission in the hospital. USG Guided EXTERNAL CEPHALIC VERSION was done Normal & abnormal outcomes were noted. The abnormal outcome includes failure of ECV and any complication which result in difficult or abnormal delivery.

Results**Table 1: Distribution of cases according to age group**

| Age interval | Number of cases | Percentage |
|--------------|-----------------|------------|
| 18-22 | 147 | 21.60% |
| 22-26 | 337 | 49.60% |
| 26-30 | 158 | 23.26% |
| 30-34 | 30 | 4.40% |
| 34-38 | 7 | 1.00% |
| TOTAL | 679 | 100% |

In the present study the above table (1) shows that total number of breech admitted was 679 out of which maximum in the age group of 22-26 i.e 49.6%.

Table 2: Distribution of cases according to gravidity

| Gravidity | No. of cases | Percentage |
|--------------|--------------|------------|
| Primigravida | 363 | 53.46% |
| Multigravida | 316 | 46.53% |
| Total | 679 | 100% |

In the study primi breech incidence were more 53.46% as compared to multigravida breech(46.53%).

Table 3: Distribution of cases according to antenatal visit

| Booking status | No. of cases | Percentage |
|----------------|--------------|------------|
| Booked | 272 | 40.00% |
| Unbooked | 407 | 60.00% |
| Total | 679 | 100% |

In the present study above table and pie chart shows maximum number of women 407(60%) were found be unbooked and 272 (40%) of women are booked.

Table 4: Month wise Distribution of cases and incidence of breech

| Month | Total no. of deliveries | Number of Breech | Number of ECV attempted |
|---------|-------------------------|------------------|-------------------------|
| June-18 | 460 | 34 | 02 |
| July-18 | 953 | 25 | 01 |
| Aug-18 | 1124 | 44 | 02 |
| Sep-18 | 1001 | 39 | 03 |
| Oct-18 | 1121 | 32 | 01 |
| Nov-18 | 1004 | 36 | 01 |
| Dec-18 | 1100 | 35 | 02 |
| Jan-19 | 1272 | 42 | 01 |
| Feb-19 | 1262 | 31 | 01 |
| Mar-19 | 1231 | 39 | 02 |
| Apr-19 | 1217 | 41 | 03 |
| May-19 | 717 | 30 | 01 |
| June-19 | 1127 | 44 | 02 |
| July-19 | 419 | 42 | 02 |
| Aug-19 | 1442 | 36 | 02 |
| Sep-19 | 1114 | 43 | 01 |
| Oct-19 | 551 | 38 | 01 |
| Nov-19 | 1293 | 48 | 02 |
| Total | 17,308 | 679 | 30 |

The above table show month wise total no. of deliveries and breech admitted in the hospital, in study period total no. of cases delivered during the study time found to be 17,308 out of which 679 patient were breech, so incidence of breech found to be 3.9 %. Among them 30 patient give consent for ECV.

Table 5: Distribution of breech according to associated Risk Factors

| Risk Factors | Number of Cases | Percentage |
|-------------------------|-----------------|------------|
| Pre-eclampsia | 36 | 5.3% |
| Eclampsia | 03 | 0.4% |
| Previous Section | 30 | 4.0% |
| Footling Breech | 44 | 6.4% |
| Big Baby | 43 | 6.3% |
| Diabetic | 00 | 00% |
| Polyhydramnios | 07 | 0.1% |
| Oligohydramnios | 46 | 6.7% |
| In Labour | 277 | 40.8% |
| Abruption | 13 | 19% |
| Without Any Risk factor | 74 | 11% |
| Total | 679 | 100% |

In present study out of the 679 patients with breech 277 (40.8%) are in labour, some present with pre eclampsia (5.3%), eclampsia (0.4%), previous section(4.4%), footling breech(6.4%), Big baby (6.3%), polyhydramnios (0.1%), oligohydramnios (6.7%), abruption (19%), only 74(11%) cases are without any risk amongst them ECV was offered and only 30 give the consent.

Table 6: Outcome of external cephalic version

| ECV Attempted | Total No. of Cases | Percentage |
|---------------|--------------------|------------|
| Successful | 9 | 30% |
| Failed | 21 | 70% |
| Total | 30 | 100% |

In present study total number of ECV offered to 74 women with breech out of which 30 give consent. Out of 30 cases the procedure is found to be successful in 9 cases, hence the success rate for ECV for present study is 30%.

Table 7: Distribution of cases as per mode of delivery

| Mode of delivery | Number | Percentage |
|--------------------------|--------|------------|
| Assisted breech delivery | 268 | 39.46% |
| LSCS | 365 | 53.37% |
| Normal vaginal delivery | 09 | 1.3% |
| Still birth | 37 | 5.44% |
| Total | 679 | 100% |

In particular time period of time total number of breech deliveries were found to be 679 out of which ,268(39.4%) delivered by assisted breech delivery, cesarean section was done in 365 (53.37%) cases ,09 were delivered by normal vaginal delivery after external cephalic version, 37 women delivered vaginally still birth. Hence the section rate in our institute found to be 53.37%.

Discussion

Breech were also associated with various risk factors which are pre eclampsia, eclampsia, oligohydramnios were also common also previous 1 section is also common amongst them we can't offer ECV. In present study out of the 679 patients with breech 277 (40.8%) are in labour, some present with pre eclampsia (5.3%), eclampsia (0.4%), previous section (4.4%), footling breech (6.4%), big baby >3.5kg (6.3%), polyhydramnios (0.1%), oligohydramnios (6.7%), abruption (19%), only 74(11%) cases are without any risk amongst them ECV was offered and only 30 give the consent(5).

In present study total number of ECV offered to 74 women with breech out of which 30 give consent. Out of 30 cases the procedure is found to be successful in 9 cases, hence the success rate for ECV for present study is 30%.

In particular time period of time total number of breech deliveries were found to be 679 out of which, 268(39.4%) delivered by assisted breech delivery, cesarean section was done in 365 (53.37%) cases, 09 were delivered by normal vaginal delivery after external cephalic version, 37 women delivered vaginally still birth. Hence the section rate in our institute found to be 53.37%.

We found a lower rate of morbid obesity and hypertensive disorders in women who had ECV compared to those potentially eligible for ECV suggesting that clinicians are selectively offering ECV to low risk women, counter to current guidelines for best practice[6]. Previous caesarean section was the most common reason women

were deemed ineligible for ECV with only 2.6% of women with ECV having a history of caesarean section compared to 16.6% in women with breech presentation overall. There may be a clinical perception that with a previous caesarean section there are no safe options, however, there is little evidence that caesarean section should be considered an absolute contraindication for ECV. To the contrary, there is some evidence suggesting the success and associated risks of ECV in women with one previous caesarean section are similar to those in women without such history. Similarly, selection on factors favourable to ECV may have occurred: multiparous women were more likely to undergo ECV even though nulliparous women comprise the majority of women with breech presentation. This may also reflect different likelihoods of accepting ECV among nulliparous and multiparous women.

This is concerning given the high risk of recurrence for breech presentation; a lower rate of ECV uptake in nulliparous women has implications for not only the first, but also subsequent pregnancies.

Vedpathak S G et al(2017)[7] found that the mean age of women in the study group was 24.44±3.8711 years. 80% patients are of age between 20-30 with average age 25. Which is quite similar to our study.

In Our study total no. of cases delivered during the study time found to be 17,308 out of which 679 patient were breech, so incidence of breech found to be 3.9 %. Among them 30 patient give consent for ECV. Deepika N, Kumar A (2017)[8] study the incidence of breech presentation was 4.9% and among the 6038 deliveries 301 were breech and ECV was performed on 77 patients. In the study primi breech incidence was more i.e. 53.46% as compared to multigravida breech which is 46.54%.

Our study total number of ECV offered to 74 women with breech out of which 30 give consent. Out of 30 cases the procedure is found to

be successful in 9 cases, hence the success rate for ECV for present study is 30%.

Deepika N, Kumar A et al 2017[8] found the success rate of ECV in the present study was 54.54%. This is comparable to 50-60% success rate in most studies. Vedpathak S G et al (2017)[7] success rate of almost 60%.

Success rate is low in our institute as there is multiple factors social factors patient have anxiety regarding the procedure and family members are illiterate and refuses to give consent for the procedure. Also there referral cases and patients coming in advance labour are more[9].

Natalie Kew et al 2017[10] study found that Rate of success of ECV for breech presentation at term at the Royal Women's Hospital Australia was 37%. Even though several previous studies have assessed the economics of ECV, investigators did not incorporate quality of life as outcome measures in their findings.

Conclusion

It was concluded that External Cephalic Version is a valuable though under used option in the management of breech presentation at term. It is a relatively safe procedure, complications were very rare, it is simple to learn and perform. Vigilance for searching breech presentation and counselling after 36 weeks is important. A proper understanding of the risk is essential for the obstetrician to allow accurate counselling. Breech presentation is associated with higher incidence of mortality and morbidity irrespective of the route of delivery as compared to cephalic presentation. Any complications associated with breech presentation can be reduced by converting it to cephalic presentation by ECV.

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Conflict of Interest: Nil

Source of support: Nil