Original Article

# Success of External Cephalic Version and Frequency of Cesarean Section in Patients

C. Section after External Cephalic Version

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## ABSTRACT

**Objective:** Frequency of success in patients undergoing external cephalic version and assesses rate of C-section after successful external cephalic version.

**Study Design:** Descriptive Case Series.

**Place and Duration of Study:** This study was conducted at the Department of Obstetrics & Gynaecology, M. Islam Medical College Gujranwala from October 2018 to March 2019.

**Materials and Methods:** Seventy patients with gestational ages between 34 to 40 weeks were included. Patients underwent external cephalic version in labour room by a single consultant.

**Results:** 58% patients underwent successful external cephalic version and 41% patient's external cephalic version were not successful. Among patients undergoing successful external cephalic version, 39% were delivered by cesarean section and 61% were delivered by spontaneous vaginal delivery. There was no maternal and fetal complication noted.

**Conclusion:** External cephalic version is a safe and effective treatment modality with high rate of success and also effective for reducing the rate of cesarean sections.

**Key Words:** External cephalic version, Frequency, Cesarean section

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## INTRODUCTION

External cephalic version (ECV) is a procedure in which a fetus that is lying in a breech position is turned so that the head enters the birth canal first.[1] External cephalic version is considered safe and effective method of turning the baby from breech to head first.[2] It is very useful and effective methods for reducing the frequency term breech delivery also helpful for reducing the complications associated to term breech presentation. In developing and developed countries ECV is considered effective for reducing the rate of cesarean delivery.[3]

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Breech presentation is associated with increase rate of morbidity and mortality, it complicates 3 to 4% of term deliveries. It is a most common risk factor of preterm deliveries. From last two decades the rate of C-sections has been increased due to breech presentation. Globally the rate of cesarean deliveries is increases due to breech presentation.[5] Several studies demonstrated that External Cephalic Version is safe and effective for reducing the rate of cesarean deliveries.[6] Approximately 8% of primigravid women has spontaneous version rate after 36 weeks of gestation.[7] Success rates of ECV is accounted 30 to 80% and less than 5% of women after successful ECV has reversion of spontaneous breech presentation.[8,9]

The success rates for ECV vary widely but ranges from 35-86% (average 58%). Approximately 47% of women whom had received ECV had a cephalic presentation at birth. Studies reported that multiparous women had a high rate of successful ECV as compared to nulliparous.[11] The success of ECV depends upon various factors. Race, parity, uterine tone, liquor volume, engagement of breech, whether the head is palpable and the use of tocolysis all effects the success rate of ECV.[12] The success rate of ECV is increased by the use iftocolysis and increase in success rate is evident with epidural but not with spinal analgesia.[13]

External Cephalic Version has fewer rate of complications. No major complications have been reported due to ECV. Many of previous studies reported that ECV procedure is very safe and effective

for lowering the rate of cesarean deliveries with no major complications.[14]

This study focuses on the success of ECV and reducing the frequency of cesarean sections in these pts. Thus decreasing the morbidity, expenditure and hospital stay of the patients..

# MATERIALS AND METHODS

This descriptive case series was carried out at Department of Obstetrics & Gynaecology, M. Islam Medical College Gujranwala from 1st October 2018 to 31st March 2019. Seventy pregnant females with breech presentation undergoing ECV were included. Patients 20-35 years of age with any parity, gestational age between 34-40 weeks, breech presentation, singleton pregnancy, thin and relax abdominal wall were included. Women with placenta previa, confirmed on scan, history of anti-partum hemorrhage, IUGR, significant fetal anomalies, ruptured membranes, elective cesarean section is indicated and previous one cesarean section were excluded. Patients were explained aims, methods, benefits and potential hazards of the study. Subjects were informed that their participation was voluntarly and that they may withdraw at any time during the study. An informed consent was taken. The patient was instructed to empty her bladder first and then was allowed to rest and relax on the couch with a mild degree of head down tilt. The whole procedure was explained to the patient in a sympathetic manner to allay her anxiety. An USG was performed to confirm the presenting part, fetal cardiac activity and location of placenta. Fetal wellbeing was assessed by NST. The breech was then held in right hand while the left hand was placed over the fetal head. A sustained pressure was applied by both hands simultaneosly in the direction which would promote fetal flexion and simultaneously rotating the fetus. After that, the attitude of the fetus was maintained manually for few minutes. No analgesia, anesthesia or sedation will be used during the procedure. After that, an USG was performed to confirm the fetal position. CTG was performed to assess the fetal well being. The patient was made to lie on the couch for about 15-30min. If NST was fine and the patient was stable, she was sent and followed in OPD after one week to confirm the presenting part. She was counselled about signs and symptoms of labor. Her labour was monitored and maternal outcome was noted in the form of cesarean section. The data was analysed using SPSS-20..

# RESULTS

The parity and gestational age of patients undergoing external cephalic version showed in Tables 1-2. There were 41 (58.5%) patients were successful external cephalic version and 29 (41.5%) were failed external cephalic version (Table 3). Regarding mode of delivery in patients with successful external version, 16 (39%) patients were caesarean delivery and 25 (61%) normal vaginal delivery (Table 4).

**Table No. 1: Parity of patients undergoing ECV (=70)**

| Parity | No. | % |
|---|---|---|
| PG | 30 | 42.9 |
| Para 1 | 19 | 27.1 |
| Para 2 | 11 | 15.7 |
| Para 3 | 5 | 7.1 |
| Para 4 | 4 | 5.7 |
| Para 5 | 1 | 1.5 |

**Table No.2: Patients undergoing ECV according to gestational age (n=70)**

| Gestational age (weeks | No. | % |
|---|---|---|
| 34-36 | 45 | 64.3 |
| 37 – 38 | 23 | 32.8 |
| 39-40 | 2 | 2.9 |

**Table No.3: Results of ECG (n=70)**

| ECV | No. | % |
|---|---|---|
| Successful | 41 | 58.5 |
| Failed | 29 | 41.5 |

**Table No.4: Mode of delivery in pts with successful ECV (n=41)**

| Mode of delivery | No. | % |
|---|---|---|
| Cesarean delivery | 16 | 39.0 |
| Normal vaginal delviery | 25 | 61.0 |

# DISCUSSION

**External cephalic version** is one of the safest procedures of decreasing the number of cesarean section due to breech presentation. Success rates will be higher when the pt. presents one or more good prognostic factors, as described previously.[15] Globally, ECV is considered a cost effective procedure in the management of breech presentation at term; however there is a wide variation in the success rate, with a range between 30-80%, the ECV technique has remained unchanged for many generations without any modifications.[16]

In the present study, success of ECV was about 58%. This observation is similar to those of Ranjon[17], Wise et al[18], but differ from Ben-Meir et al[19] and Rauf et al.[20] On the other hand, the success rate of ECV in this study was higher than those done by Nassar et al[21] and Zeck et al.[22]

In this study, among the successful ECVs, 61% were delivered vaginally which differ from the study of Zeck eta l[22] and Wise et al[18], who reported much more cases who deliver vaginally after successful ECV. As discussed earlier, in this study following successful ECV, spontaneous vaginal delivery was attained by 61% and 39% underwent cesarean section due to various indications, which was slightly different from the study done at Hayatabad Medical Complex Peshawar, which shows that after successful ECV, spontaneous vaginal delivery was attained in 77.7% of the pts.[20]

As far as the parity in success of ECV is concerned, this study shows that ECV was more successful in multi gravidas, i.e. 76% as compared to nulliparous women which was just 24%. These findings were slightly different from those of Ben-Meir et al[19] in which success rates were 72.3% and 46.1% in multi-paras and nulli-paras respectively.

There were no complications related to ECV in this study, as also seen in the study of Grootscholten et al[23], but in the study of Flamm et al[24], there was a risk of detectable feto-maternal hemorrhage during ECV in 2.4% of cases and in the study of Collins et al[25], there was 0.5% risk of emergency cesarean section after the procedure.

The study also shows that beginning of ECV between 34-35 wks may have some benefit in terms of decreasing the rate of non-cephalic presentation and cesarean section, as also shown in the study of Hutton EK & Hofmeyr GJ.[26].

# CONCLUSION

External cephalic version is very useful and effective method for reducing the rate of cesarean deliveries. We concluded from this study that the rate to successful External cephalic version rate is 58% and it is satisfactory and comparable to other studies. Also we found that after ECV the rate of normal vaginal deliveries was high and this procedure concluded safe and effective for reducing the rate of C-sections. No major complication and mortality was recorded.

**Author's Contribution:**

| | |
|---|---|
| Concept & Design of Study: | Wajiha Mehwish |
| Drafting: | Saliha Farooq, Sabahat Khan |
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**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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