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EDITORIAL

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External cephalic version

Breech presentation is the most common abnormal presentation occurring in 3-4% of all deliveries. Till 15th century breech presenting babies were always delivered vaginally. Various maneuvers to assist breech delivery, especially delivery of the extended arms and/or the after coming head are widely practiced. Some obstetricians routinely apply forceps to the after coming head. It was only in the mid 16th Century that external cephalic version (ECV) was perfected and popularized to avoid breech delivery. Even after about 500 years ECV is generating controversies.

Fifty years back, at the hospital where I was undergoing postgraduate training, all possible attempts were made to restrict the incidence of cesarean delivery under 2%. This was because of the high maternal morbidity and even some mortality associated with it. Hence, breech presentating babies were routinely delivered vaginally unless cesarean section was mandated for other indications. It was but natural that efforts were made to avoid breech presentation by ECV. But while some staff members passionately practiced ECV – sometimes even under anesthesia – with variable outcome others were not enthusiastic about ECV because of poor success and fear of possible complications. What cannot be disputed is the fact that vaginal breech delivery entails some perinatal mortality and significant neonatal morbidity.

With the passage of time obstetric practice has changed drastically. Advances in anesthesia, safe blood transfusions and new antibiotics have led to marked liberalization of the indications for cesarean section. As a result, many advocate planned cesarean section for every breech presentation unless the baby is malformed or the mother's condition makes the operation risky. Yet, rising cesarean section rate is causing much concern all over the world just as it did 50 years back. This is because of associated maternal morbidity, liability of the uterine scar in future pregnancy, and some maternal mortality, howsoever small. One option for reducing cesarean section rate is to avoid breech presentation at labor by converting it into vertex presentation during pregnancy itself. This can only be done by ECV.

The technic of ECV can simply be described as lifting the breech out of the pelvis, flexing the fetal spine and turning the fetus through 180^0 in the direction that maintains fetal flexion throughout. This is facilitated by relaxation of the abdominal wall and the uterine muscle. The former is achieved by sedation if necessary but the use of anesthesia is generally not advocated and best avoided. Use of tocolytics to relax the uterus is very helpful.

ECV is superfluous and should not be undertaken when cesarean delivery is planned for other indications like contracted pelvis, large baby, previous cesarean delivery placenta previa, fetal hypoxia and intrauterine growth restriction. It is not advisable in multiple pregnancy, placenta covering the anterior uterine wall, gross maternal hypertension, scarred uterus, short umbilical cord, cord round the neck and ruptured membranes. In general, second of the twin presenting by breech can be safely delivered vaginally. Yet, ECV remains a good option, it being relatively easy before uterine contractions resume after the first baby is born. How effective or successful is ECV? The available data is contradictory. Much depends on the skill, experience, and determination of the obstetrician. ECV is more often successful in expert hands, multiparas, and earlier periods of gestation. No one advocates ECV earlier than 33 weeks of gestation and many not before 36 weeks. This is because at earlier weeks there are chances of spontaneous correction. Effective success rate of ECV must take into account the possibility of spontaneous reversion to breech presentation after ECV. Kasule et al [1] conducted a prospective randomized controlled trial to evaluate ECV after 30 weeks and found that incidences of vaginal breech delivery, cesarean delivery, and perinatal mortality and morbidity were not significantly different with or without ECV. They concluded that ECV has no place before 36 weeks. In fact, some feel that successful ECV only anticipates what would have been a spontaneous version. van Veelen et al [2] did repeated ECVs between 33 and 40 weeks without using analgesics, anesthetics and tocolytics. In 90 women, they resorted to ECV on 188 occasions with a 25% success rate. Most successes were at or before 36 weeks, Forty-eight percent of the 90 women had vertex presentation at delivery compared to 26% of the 90 controls who had no ECV. Of the controls who had entered labor with vertex presentation, 90% had the vertex presenting by 38 weeks. They concluded that ECV reduces the frequency of breech delivery and cesarean section without affecting neonatal outcome [2]. Laros

et al [3] undertook ECV after 36 completed weeks with 51% success. But 31% of those with successful version needed cesarean section because of failurue of induction of labor or lack of progress of labor. This is much higher than their 15% cesarean section rate in all term singleton vertex presentations but very much lower than the 82% cesarean section rate in those in whom ECV had either failed or was not attempted. In other words, 69% of those with successful ECV delivered vaginally compared to only 18% with failed ECV or no ECV. This speaks volumes in favor of ECV. Healey et al [4] attempted ECV on 89 women at or after 36 weeks with 39% success. They needed tocolysis in 41 of these 89 women. The 63% cesarean section rate for breech presentation at their hospital prior to the introduction of ECV was reduced to 47% in women in whom ECV was resorted to while 5.9 ECVs had to be attempted to avoid one cesarean section. In their experience operater's skill, placental site, position of fetal back, and amniotic fluid index significantly affect the success of ECV. Hofmeyr and Kulier [5] reviewed six randomized trials comparing ECV at term with or without tocolysis, with no attempt at ECV and concluded that ECV at term, significantly reduced non-cephalic births (RR 0. 42; 95% CI 0.35 - 0.50) and cesarean sections (RR 0.52; 95 CI 0.39 - 0.71) without significantly affecting perinatal mortality (RR 0.44; 95% CI 0.07 -2.92). Albrechtsen et al [6] in a systematic review of ECV concluded that ECV could reduce cesarean sections for breech presentation without affecting perinatal mortality.

ECV is considered reasonably safe for the fetus though van Veelen et al [2] had one incidence of transient fetal bradycardia in 188 ECVs and Kasule et al [1] report three perinatal deaths directly due to ECV in 310 attempted ECVs. It is mandatory to monitor fetal heart for 30 minutes after ECV and undo the version if fetal heart is adversely affected. This will avoid intrauterine death due to cord complications resulting from ECV. As far as the mother is concerned ECV is safe provided one excludes contraindications and does not persist beyond reasonable efforts.

Management of breech presentation is controversial, both with regard to manipulation of the fetal presentation and the mode of delivery. According to Nagy and Huvar [7] ECV is a safe, simple and cheap procedure which should be routinely employed as a part of management of breech presentations. Attempting ECV at term appears to reduce non-cephalic births and cesarean sections [5]. Bashiri et al [8] state that successful ECV is the only effective way to avoid cesarean sections for breech presentation and ECV should be considered in every woman with breech presentation. One can rightly conclude that ECV is highly desirable since it reduces the need for cesarean section without significantly affecting the fetus. This notwithstanding, there are controversial views regarding certain aspects of ECV. Although van Veelam et al [2] resort to ECV as early as 33 weeks others [3-5] like to undertake ECV if breech presentation persists till 36 weeks. Kasule et al [1] emphatically state that there is no place for ECV before 36 weeks. The use of anesthesia is generally not favored. But use of sedation and tocolytics should be considered optional and the decision left to the obstetrician. Permitting vaginal delivery of breech is another controversial area related to ECV.

One can conclude that one third of women with breech presentation benefit by ECV without any harm to the mother or her fetus. Clarke [9] emphasizes the need to improve ECV skills. This is very important in a developing country like ours. It is obligatory that skills for performing ECV should be developed, promoted and improved with continuous practice at all medical colleges and teaching hospitals. Training in the art and skill of performing ECV must be made mandatory part of postgraduate education in obstetrics. In addition, it must be realised that conducting vaginal breech delivery is rapidly becoming a forgotten art. An obstetrician in any part of the world will have to handle vaginal breech delivery – planned or unplanned. In our country, as in other developing countries, facilities and the expertise in performing cesarean section are not existing at many health care centers conducting deliveries. There is no substitute for skillful assisted vaginal delivery of breech presenting fetus under these circumstances. Ghosh [10] states that several retrospective, prospective, and randomized studies of vaginal deliveries of some types of breech cases were conducted under strict selective protocols with results of outcome comparable to those of cesarean deliveries. We would like to emphasize that though ECV is highly desirable, delivering a breech vaginally is a reasonable and justifiable option in many situations. We may add that in breech with extended legs, ECV has a poor chance of success while vaginal delivery is reasonably safe by virtue of the cervix being almost fully dilated for the passage of the aftercoming head. Nevertheless, there is no substitute for preemptying breech delivery by ECV.

Lastly, a mention must be made of a novel attempt to convert breech presentation into vertex by moxibustion – a type of chinese medicine involving burning of a herb close to the skin. Applying moxibustion to the acupuncture point bladder 67 or BL67 (Chinese name Zhiyin) located at the tip of the 5th toe to convert breech presentation in vertex is being studied. Coyle et al [11] have recently examined its efficacy in three trials involving 597 women. They found that moxibustion reduced the need for ECV (RR 0.47; 95% CI 0.33-0.66) and decreased the use of oxytocin before or during labor for women who had vaginal deliveries (RR 0.25; 95%

CI 0.13-0.60). But they rightly conclude that well designed randomized controlled trials are needed to evaluate the efficacy and safety of moxibustion for breech presentation.

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