

برای همه



Instrumental delivery



Why ?



Why not ?

Indications:

1. Emergency :

- Cardiac dis
- Pulmonary dis
- Spine injuries
- Fetal distress

2. Selective :

Shortening the second stage of labor

Mother exhaustion

Prevention of cystocele & Rectocele?

Higher rates of failure are associated with

- Maternal obesity BMI >30
 - Clinically big baby/estimated fetal weight >4000 g
 - Malposition
 - Mid-cavity delivery
-

BOX 1 Classification of forceps and vacuum delivery according to station and rotation

(1) Outlet:

- Scalp is visible at introitus without separating the labia
- Fetal skull has reached pelvic floor
- Sagittal suture in anteroposterior diameter or right or left occiput anterior or posterior position
- Fetal head is at or on the perineum
- Rotation does not exceed 45°

(2) Low:

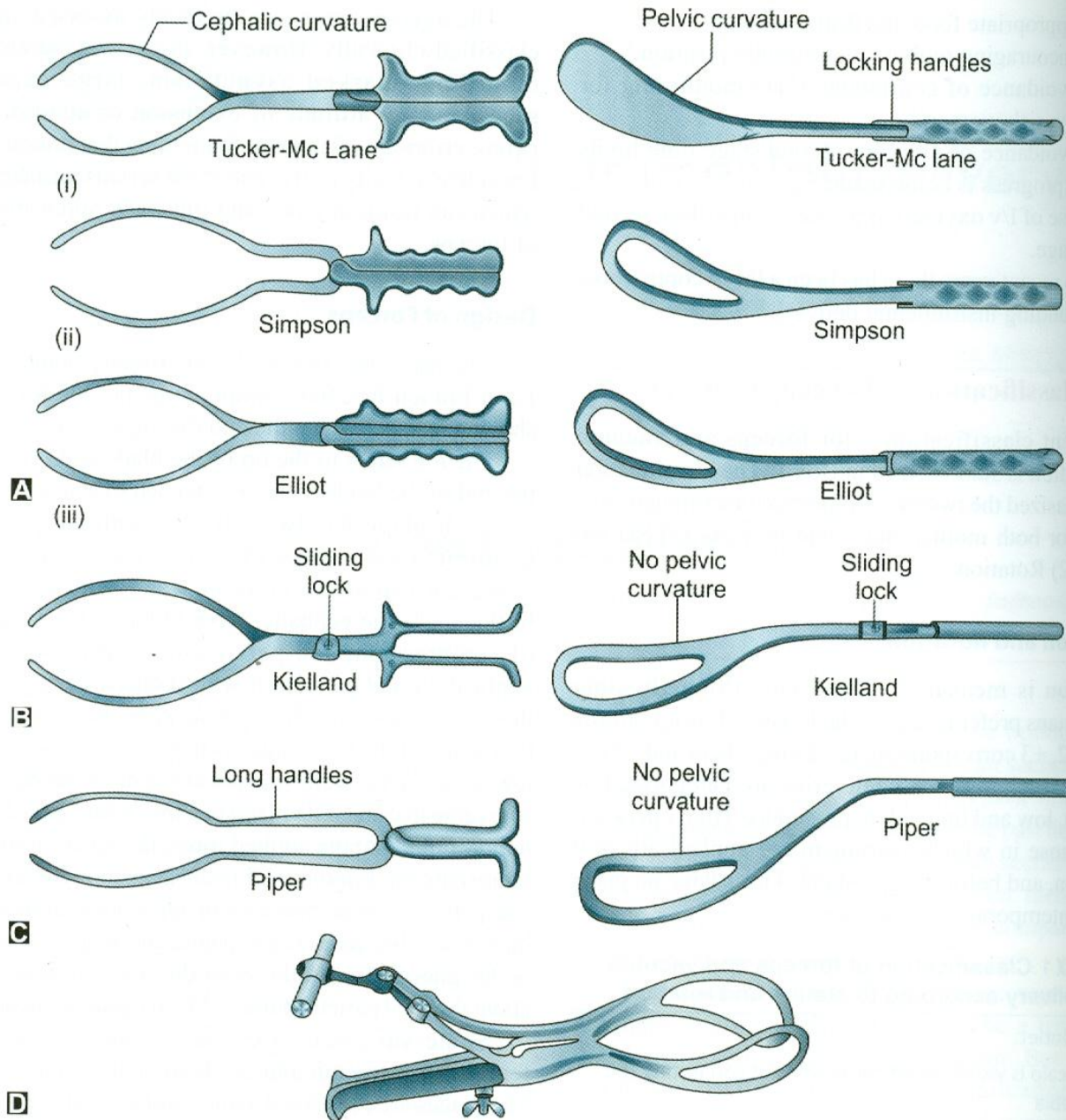
- Leading point of fetal skull is station less than + 2 cm, and not on pelvic floor
- Rotation is 45° or less (left or right occiput anterior to occiput anterior or left or right occiput posterior to occiput posterior)
- Rotation is greater than 45°

(3) Mid pelvic:


- State above + 2 cm but head is engaged

(4) High:

- Not included in classification

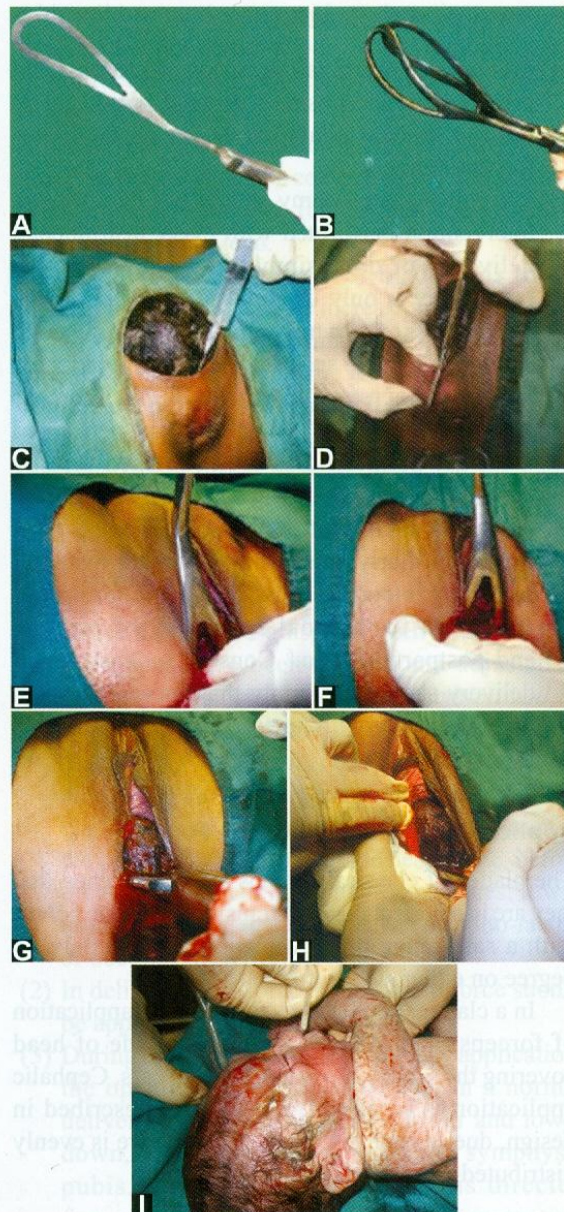


Figs 1A to D: (A) Classical forceps: (i) Tucker-Mc Lane, (ii) Simpson and (iii) Elliot, (B) Kielland rotational forceps, (C) Piper's forceps for delivery of after coming head of breech (D) Milne Murray's axis traction forceps



BOX 2 Prerequisite for assisted vaginal delivery

- Engaged fetal vertex position
- Ruptured membrane
- Fully dilated cervix
- Precisely known position of fetal head
- No cephalopelvic disproportion
- Adequate analgesia
- Empty bladder
- Knowledgeable operator
- Necessary equipment and personnel support
- Informed consent



Figures 2A to I: Steps of forceps delivery: (A and B) Check the blades and lock of forceps before application; (C and D) Infiltration of local anesthetic and episiotomy; (E) Application of right blade; (F) Application of left blade; (G and H) Steady traction and perineal support; (I) Delivery of baby.

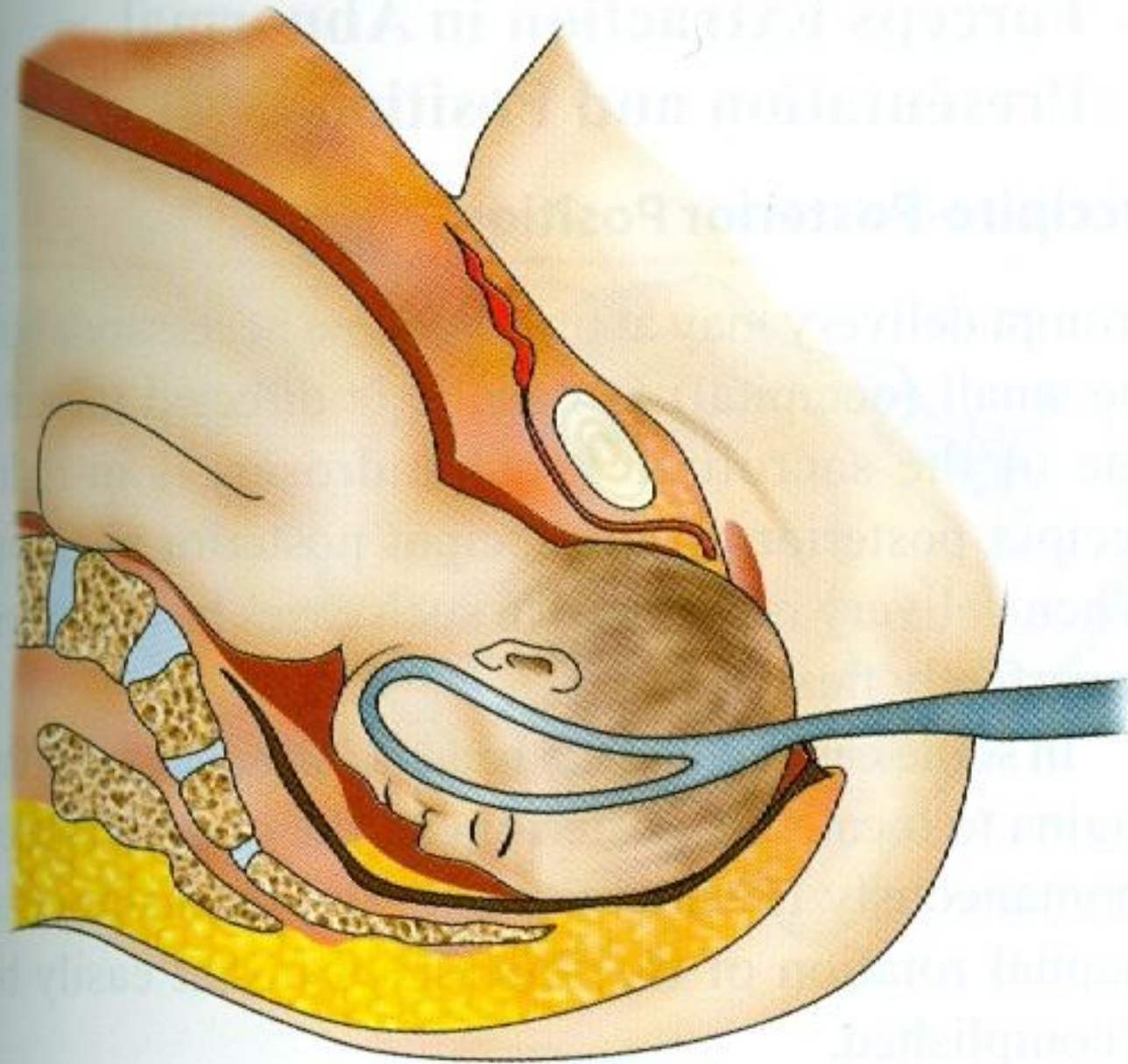


Figure 3: Ideal biparietal, bimalar application of forceps blade

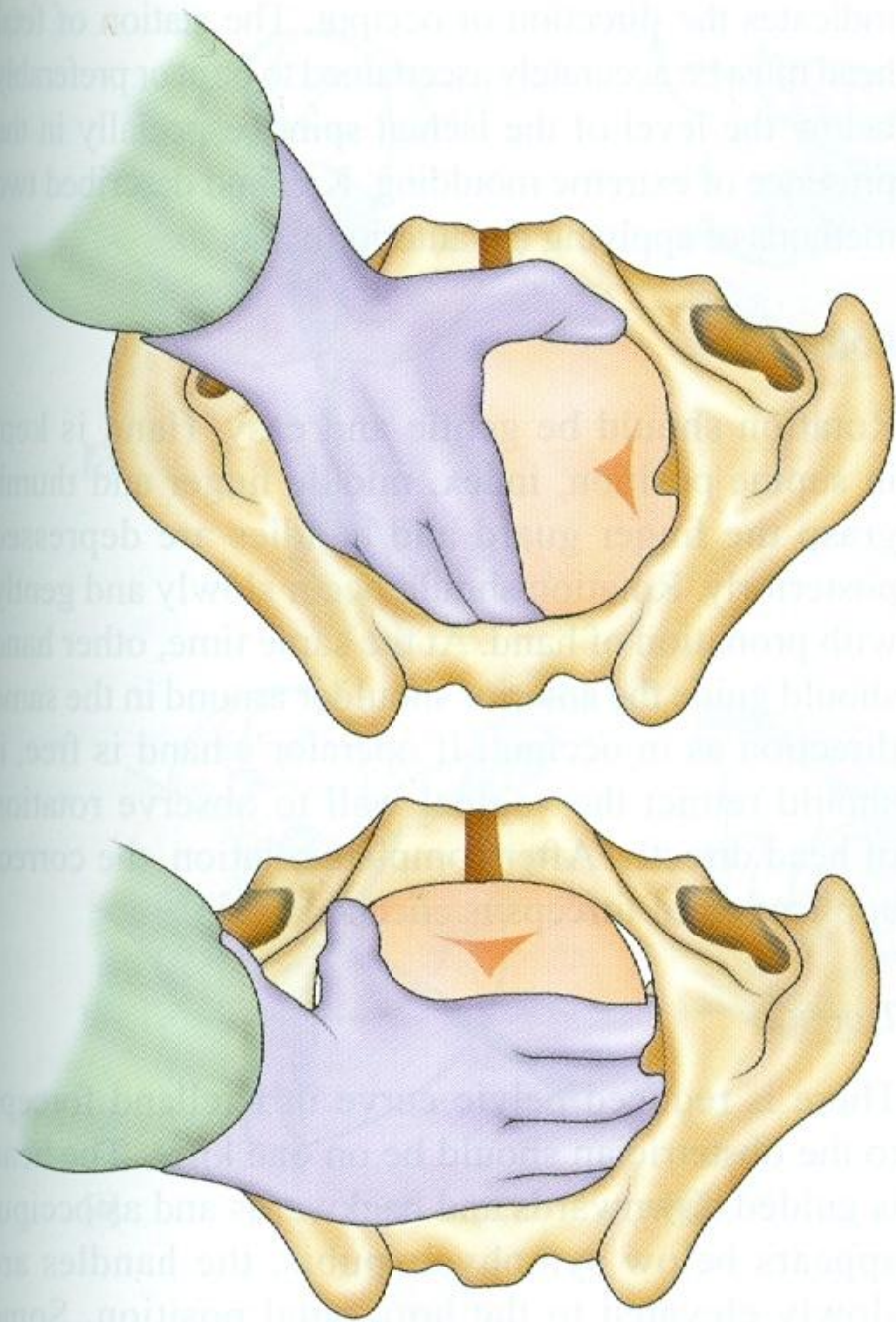


Figure 5: Manual rotation before application of forceps

VACUUM

Mitra Saxena

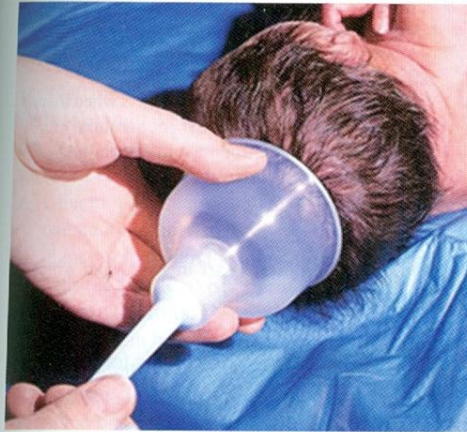


Figure 1: Proper placement of cup

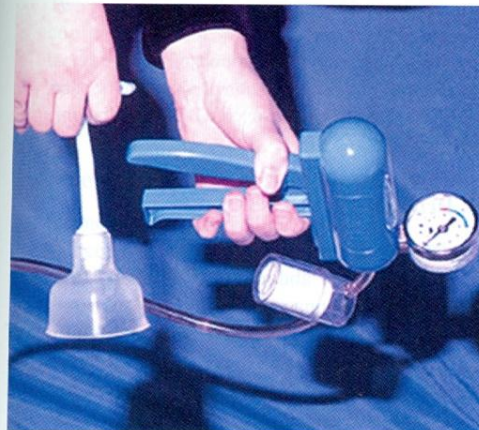


Figure 2: Bell-shaped rubber cup, gauge, manual suction device



Figure 3: Malmstrom suction cup



Figure 4: Bird suction cup



Figure 5: Auto-clavable silicon cup

TABLE 1 Comparative advantage of vacuum extraction (VE) and forceps

Vacuum extraction

- Easier to learn
- Quicker delivery (with silicone rubber soft cups)
- Less maternal genital trauma and discomfort
- Fewer neonatal craniofacial injuries
- Less anesthesia required

Forceps

- Fewer neonatal injuries including cephalhematoma
- Retinal hemorrhage and transient lateral rectal palsy
- Higher rate of successful vaginal delivery⁴⁻⁹

TABLE 2 Indications for vacuum extraction

Maternal

- Need to avoid voluntary expulsive efforts [e.g. mother has cardiac, cerebrovascular disease, previous lower segment cesarean section (LSCS)]
- Supplement maternal expulsive efforts when there is maternal exhaustion or lack of cooperation
- Less maternal genital trauma and discomfort
- Fewer neonatal craniofacial injuries
- Less anesthesia required

Fetal

- Non reassuring fetal heart in 2nd stage which is prolonged^{1,7,8,10}

TABLE 3 Relative contraindications for vacuum extraction

- Fetal prematurity (<34 weeks of gestation)
- Fetal scalp trauma
- Non vertex presentation or malpresentation
- Unengaged head/ CPD
- Suspected macrosomia
- Incomplete cervical dilatation
- Delivery requiring rotation or excessive traction
- Active bleeding or suspected fetal coagulation defects^{1,7,8,10}

CRITERIA FOR SAFE OPERATIVE VAGINAL DELIVERY

Essential

Full abdominal and vaginal examination	<ul style="list-style-type: none"> ● Head <1/5 palpable per abdomen ● Vertex presentation ● Cervix fully dilated and membranes ruptured ● Exact position of head determined so that instrument can be placed properly ● Pelvis deemed adequate ● Optimise contractions
Mother	<ul style="list-style-type: none"> ● Clear explanation given and informed consent obtained and documented (including episiotomy) ● Continuous electronic fetal monitoring ● Appropriate analgesia in place: <ul style="list-style-type: none"> ○ regional block ○ pudendal block ○ local infiltration ● Maternal bladder emptied – consider use of in/out catheter or, if indwelling catheter <i>in situ</i>, deflate balloon (recommended practice) ● Aseptic technique
Staff	<ul style="list-style-type: none"> ● Operator has been assessed as competent in the use of forceps and vacuum extractor ● Adequate facilities and back-up personnel must be available ● Back-up plan in place in case of failure to deliver ● Anticipation of complications (e.g. shoulder dystocia, postpartum haemorrhage) ● Personnel trained in neonatal resuscitation e.g. midwife or ANNP/ neonatologist (according to local policy) are present

CONTRAINDICATIONS

- Vacuum extractor contraindicated with a face presentation
- **Avoid:**
 - use of vacuum <34 weeks' gestation because of preterm susceptibility to cephalohaematomata, intracranial haemorrhage and neonatal jaundice
 - metal cups <36 weeks' gestation
 - forceps/vacuum extraction deliveries before full dilatation of cervix

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2012;14:275-6

Tips And Techniques

The Obstetrician & Gynaecologist

<http://onlinetog.org>

Vacuum extraction

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Articles in the Tips and Techniques section are personal views from experts in their field on how to carry out procedures in obstetrics and gynaecology.

A Clinical Evaluation of Forceps Delivery and its Associated Complications in Prolonged Second Stage of Labour

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Abstract

To study the clinical Evaluation of obstetrics forceps in patients with prolonged 2nd stage of labour and evaluate its associated neonatal and maternal outcomes. It was an observational cohort study over a period of one year from July 2013 to June 2014, conducted at JLN Medical college/Hospital, Ajmer. During this study period, a total of 19082 women were delivered, of which 512 underwent forceps assisted vaginal delivery. The data were collected on the structured pro-forma with variables like parity, booking status, number of maternal death after 2nd stage intervention, major obstetric hemorrhage, number of lateral vaginal wall tear, cervical tear, complete perineal tear, number of stillborn, early neonatal death, incidence of neonatal intensive care unit and sick newborn care unit admission, APGAR score at 1min. and 5min., rate of neonatal asphyxia, number of fetal scalp hematoma and facial injury. The frequency of second stage intervention (forceps) was 2.70%. The total number of Instrumental (forceps) vaginal deliveries conducted for prolonged second stage of labour was 220(1.15%). Most of the women were booked i.e., 168 (76.36%). 116(52.72%) of cases were between 18-20 years of age. 154(70%) were Primi-gravid. Maternal morbidity with instrumental (forceps) vaginal deliveries included vaginal tear in 12(5.45%) cases, cervical tear in 3(1.36%) cases, third degree perineal tear in 3(1.36%)cases and Post-Partum Hemorrhage (PPH) occurred in 16 (7.27%) cases. Out of 46 cases (20.91%) that reported for long-term follow up, only 2 had rectal incontinence. Perinatal complications of newborn included, 14 stillbirths (6.36%), 16(7.27%) early neonatal deaths, 18(8.73%) asphyxiated and 26(12.62%) grossly asphyxiated.



Delivery of an Impacted Fetal Head during Cesarean Section

 August 9, 2016 (<http://www.ijogr.com/blog/2016/delivery-impacted-fetal-head-cesarean-section/>)  DSG (<http://www.ijogr.com/blog/author/ijogr/>)

External Cephalic Version

📅 February 6, 2017 (<http://www.ijogr.com/blog/2017/external-cephalic-version/>) 👤 DSG (<http://www.ijogr.com/blog/author/ijogr/>)

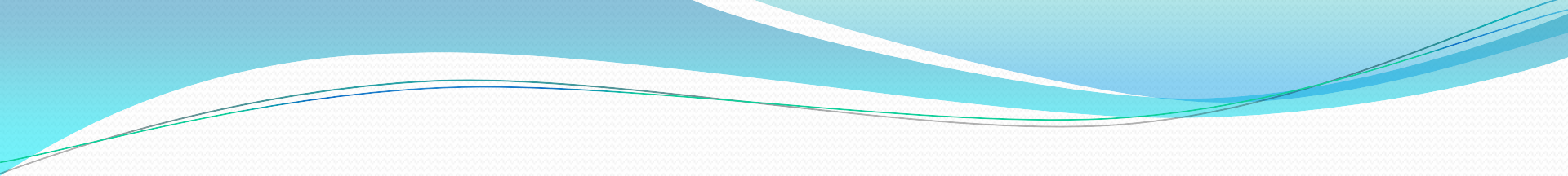
Breech presentation occurs in approximately 3–4% of term pregnancies, and there is a high cesarean delivery rate for breech presentation.

Normal vaginal delivery is possible (https://www.researchgate.net/publication/35791922_External_Cephalic_Version_for_Breech_Presentation_With_or_Without_Spinal_Analgesia_in_Nulliparous_Women_at_Term) after successful external cephalic version to convert the fetus to cephalic presentation. During ECV, a breech baby is turned to the head down position by gently pushing on the mother's abdomen (<https://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0010464/>). External cephalic version (ECV) provides a means of reducing cesarean deliveries, but implementation of ECV varies, with an estimated 20–30% of eligible women not being offered ECV.

ECV involves (<http://www.acog.org/Resources-And-Publications/Practice-Bulletins-List>) applying pressure to a woman's abdomen to turn the fetus in either a forward or backward roll to achieve a vertex presentation. The goal of ECV is to increase the proportion of vertex presentations among fetuses that were formerly in the breech position near term. Once a vertex presentation is achieved, the chances for a vaginal delivery increase. If an ECV attempt is not successful and breech presentation persists, the decision regarding mode of delivery should depend on the expertise of the health care provider.



Study (unpublished) (pilot)

- 
- 12 obstetricians
 - Volunteer for training
 - For at least 5 cases (forceps ,low)



2 didn't use it at all

10 Said : wonderful

C/S rate: ↓

