

Forceps Delivery

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- *The obstetric forceps is an instrument designed for the extraction of the head of the child, provided certain conditions are present which make the operations safe.*

DEFINITION

- **THE BLADE** : *The obstetric forceps consists of two blades, which cross each other and are called the left or lower blade, and the right or upper blade, according to the side of the pelvis to which they are applied.*

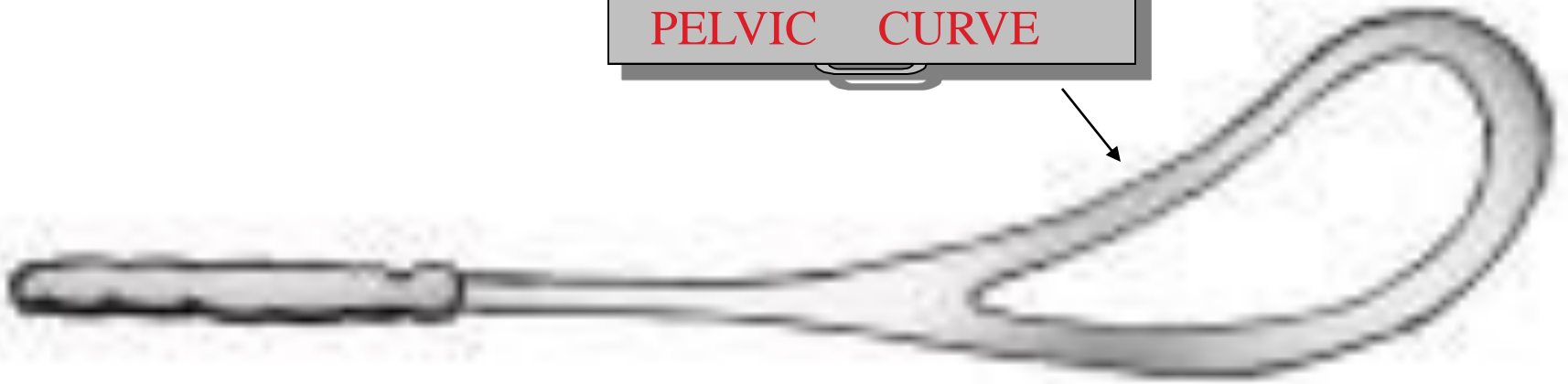
COMPONENTS OF THE FORCEPS

- **THE LOCK:** *The two blade articulate at the lock.*

- **THE SHANK:** *The shank connects the blades and the handle and gives the instrument its length.*

- **THE HANDLE:** *Finger grips or lateral flanges on the handle help in getting a secure grip.*

PELVIC CURVE

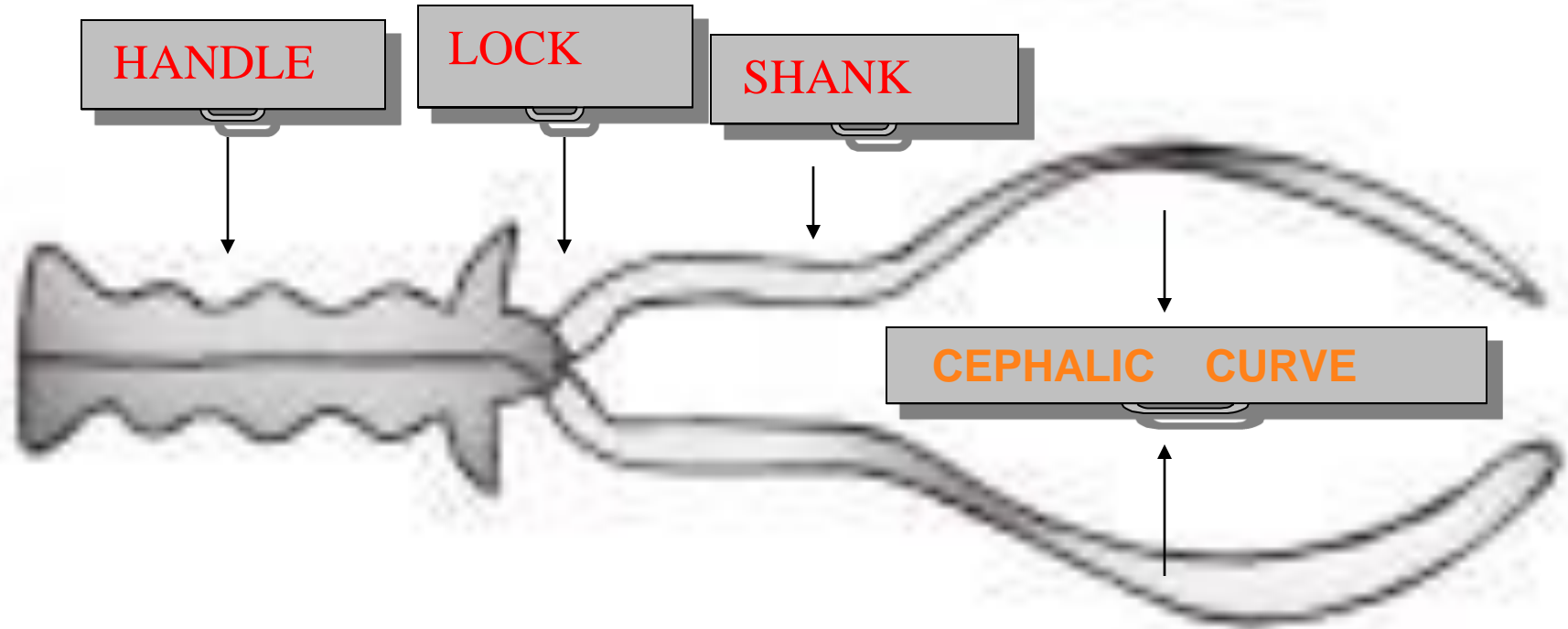


HANDLE

LOCK

SHANK

CEPHALIC CURVE



OUTLET FORCEP

- *Scalp is visible at the introits without separating the labia.*
- *Fetal skull has reached the pelvic floor*
- *Sagittal suture is in the anteroposterior diameter or right or left occiput anterior or posterior position.*

CLASSIFICATION OF FORCEP DELIVERIES

- *Fetal head is at or on perineum.*
- *Rotation does not exceed 45 degrees.*

LOW FORCEPS

- *Leading point of fetal skull is at station +2 cm, and not on the pelvic floor*
- *Rotation is 45 degrees or less*
- *Rotation greater than 45 degrees*

**MID
FORCEPS**

- *Station above +2 cm but engaged.*

**HIGH
FORCEPS**

- *Not included in classification*

- Traction: *This is the most important function.*
- Rotation: *Forceps is used for rotation in the transverse or posterior position*

FUNCTIONS OF FORCEPS

- **MATERNAL:** *These include disease states that impair the ability to push and conditions that may be worsened by prolonged by prolonged expulsive efforts, e.g. Heart disease, pulmonary compromise intra partum infection*
- **FETAL:** *These include umbilical cord prolapse, premature separation of the placenta and non-reassuring fetal heart rate pattern.*
- **MATERNAL AND FETAL:** *This includes prolonged second stage of labor. It is defined as more than 3 hrs with and more than 2 hr without regional anesthesia in nulliparous women.*

INDICATIONS OF FORCEPS APPLICATION

- **The prophylactic forceps: The term prophylactic forceps has been used to indicate delivery by forceps when there is no strict indication.**

The reason for prophylactic forceps is the fear of the damage that could be done to baby's head if it is left on the perineum for a long time and also to the pelvic floor by the continued pressure of the head although there is no definite proof for the same

TYPES OF FORCEPS APPLICATION

- **INDICATED FORCEPS:** The term indicated forceps is used when it is applied only in indications.

TRIAL OF FORCEPS:

- When the operator anticipates the possibility of failure and makes advance preparations for cesarean delivery, the forceps application is known as trial of forceps.

- **FAILED FORCEPS:** The term is applied when the forceps application fails to deliver the baby and this failure was not anticipated.

METHOD OF APPLICATION

- The **bladder** should always be emptied by the passage of a catheter.
- The operation is best performed under **pudendal block anesthesia** regional or general anesthesia may be necessary on occasions.
- The patient should be brought to the edge of the bed and made to lie in the **dorsal posture**, with the less supported mechanically or by assistants.
- The operative field is then covered with **sterile towels** or sheets.

- There are two ways of applying forceps.
the cephalic method.
the pelvic method.

- Cephalic method – in this the blades are applied at either ends of biparietal diameter where each ear will be in the centre of each fenestrate of the forceps.

- PELVIC METHOD –In this the blades are applied with reference to the maternal pelvis, one being placed on the right side and the other on the left side.

If the occiput has not fully rotated to the front , pelvic application of the forceps may cause trauma to the fetal head during traction as it will be compressing larger diameters of the fetal skull.

- Occipitoanterior forceps delivery.
Outlet forceps delivery
- Forceps in occipitoposterior positions of the vertex.
- Forceps in face presentations
- Forceps to the aftercoming head.
- Forceps to the decapitated head.
- Kiellands forceps,

- Maternal complications:
 - a. extension of episiotomy.
 - b. vaginal lacerations.
 - c. cervical tear.
 - d. injury to the lower uterine segment with damage to the uterine artery.
 - e. traumatic hemorrhage.
 - f. bladder injury, which may later lead to vesicovaginal fistula.
 - g. Rectal injury.
 - h. Puerperal sepsis.

Morbidity from forceps application

- Fetal complications
 - intracranial hemorrhage
 - skull fractures
 - cephalhematoma
 - facial nerve palsy

- Slipping of the forceps.
 - a. Faulty application.
 - b. Occipitoposterior position.
 - c. A small head or a macerated fetus.

**THE VACUUM
EXTRACTOR.(VENTOUSE)**

- Method of getting hold of the fetal head while it is still in birth canal.
- The obstetric forceps applied round the head given forces theoretically to the base of skull, the extractor grips the scalp and it is almost true to say that the baby is pulled out by its hair.

- The instrument consists of the extraction cups of different size 30, 40,50 and 60mm in diameter, a vacuum generator apparatus consisting of vacuum bottle and gauge and the correcting tubing.

Part of instrument

- Same as forcep delivery
- If the head below the ischial spine.
- Use with a partially dilated cervix and a head high mid cavity when forceps cannot be employed.

Indications

- Brow, face or other non-vertex presentations.
- Extreme prematurity.
- Fetal coagulopathies.
- Following recent scalp blood sampling.

Contraindication



Thank

You