Forceps – Additional Information

THE TYPES OF PROCEDURES

Outlet Forceps:

The scalp is visible without separating the labia.

The fetal skull has reached the pelvic floor.

Sagittal suture is in an anterior-posterior diameter, or Right Occiput Anterior (ROA), or Left Occiput Anterior (LOA), or Occiput Posterior (OP).

The Fetal head is at or on the perineum.

Rotation during delivery does not exceed 45 degrees.

Low Forceps:

The leading point of the fetal skull is at least +2 centimeters and not on the pelvic floor.

- Rotation is less than or equal to 45 degrees or
- Rotation is more than 45 degrees.

Mid Forceps:

Station is above +2 centimeters but the head is engaged.

PREREQUISITES FOR FORCEPS OPERATIONS

First, the exact fetal head position should be determined. Trace the sagittal suture to both ends, identifying the anterior and posterior fontanelle. The fontanelles are identifiable by the number of bones at their intersection. The posterior fontanelle has three intersecting lines where the two edges of the occipital bones intersect with the sagittal suture, and the anterior has four intersecting lines where the coronal sutures intersect with the sagittal suture and the frontal suture. The anterior fontanelle is typically diamond shaped, and the posterior is triangular. Where there is a lot of caput, palpating the external auditory meatus and the pinna can be helpful. Ultrasound can also be used to help clarify the position.

In addition to identifying the orientation of the fetal head, any head tilting or asynclitism should be identified. Anterior asynclitism occurs when the fetal sagittal suture lies posterior to the midline or toward the posterior fetal shoulder.

After identifying the fetal position, attention is directed to assessing the shape and capacity of the maternal pelvis. For the most part, clinical pelvimetry during early pregnancy has been appropriately abandoned. However, prior to performing operative vaginal deliveries, it is critical to be able to assess the mid-pelvis and outlet. By the

time a forceps operation would be considered, the fetal head would have passed through the pelvic inlet.

Assess the mid-pelvis by evaluating the shape (hollow or flat) of the sacrum, the prominence of the ischial spines, and the width of the sacrosciatic notch. The sacrosciatic notch should be at least two fingerbreadths wide. If the spines are prominent, the sacrum flat and anterior, and the sacrosciatic notch is less than two fingerbreadths as with an android-type pelvis, the likelihood of fetal trauma is increased unless the fetal BPD has clearly passed through the mid-pelvis.

Assess the pelvic outlet by evaluating the intertrochanteric diameter with your fist. This width is normally at least eight centimeters. The coccyx should be palpated, and the angle of the symphysis should be evaluated. A sub-symphysis angle of less than 90 degrees, an anterior placed coccyx, and a narrow interischial-tuberosity angle portent a worse prognosis for success. The operator must be able to ascertain where the pelvis provides the most space for facilitating the delivery to include any fetal rotation if that is to be considered. Caldwell and Moloy characterized the pelvic types. All obstetric providers should be intimately familiar with the pelvic types described by the Caldwell and Moloy system. The pelvic shapes play a large roll in the fetal head position during delivery and help indicate if and how an operative vaginal delivery should be attempted.

To facilitate evaluation of the pelvis and fetal position, the mother is typically placed in a lithotomy position with the legs properly supported. Excessive flexion or abduction of the thighs increases the tension on the perineum and makes perineal rupture and dystocia more likely. In fact, at the time of delivery, extending the maternal thighs to approximately 45 degrees and adducting the thighs to no more than a 45-degree angle maximally relaxes the perineum.

In final preparation for the delivery:

- The maternal buttocks should rest at the end of the table.
- The maternal urethral meatus should be prepped with a sterile solution and the bladder emptied with an in-and-out catheter. When the fetal head is low in the pelvis, it may be necessary to splint by placing a finger on either side of the urethra.
- Assure adequate anesthesia.
- Confirm the forceps articulate well and shadow their position for delivery prior to placing the forceps.