Vacuum vs. Forceps

Vacuum deliveries are almost always performed when the fetal head is at least +2 station or lower, and they should not be used when maternal expulsive efforts are to be avoided. On the other hand, because vacuum devices don't significantly add to the distension of the vagina and introitus, they are typically less painful to apply and use than forceps and thus may be used with minimal or no anesthetic agent.

When making a choice between a vacuum and forceps delivery, carefully consider the following:

- Your *individual skill with the instruments is the biggest key* to success and safety of the specific operation. Providers who are skilled at vacuum or forceps are likely to be successful and have low rates of serious complications. (See Abenhaim HA, et al, *Eur J Obstet Gynecol Reprod Biol* 2007; 134;164-68.)

- Overall, the literature suggests that compared to vacuum, forceps are more likely to successfully deliver the baby vaginally, but are also more likely to:
    - Result in third- or fourth-degree perineal lacerations
    - Cause injury to the facial nerve of the baby
    - Cause bruising on the baby's face or scalp

- However, forceps are less likely to cause cephalohematomas or result in shoulder dystocia compared to vacuum.

The great majority of retrospective studies conclude that forceps operations are less likely to fail to deliver the baby than vacuum instruments. This is probably due to the fact that forceps function more like a shoehorn. Rather than serve to "pinch" the baby's head and pull it out, the forceps serve to expand the maternal tissues and position the baby so that the smallest head diameter passes through the maternal pelvis.

Similarly, successful vacuum deliveries guide the smallest fetal head diameter through the pelvis. However, vacuum instruments require some degree of traction on the fetal scalp. Hence, they are more commonly associated with bleeding in or under the fetal scalp. Forceps deliveries are also associated with fewer incidents of shoulder dystocia than are vacuum deliveries.

A combined delivery is when you use a vacuum followed by forceps or vice versa. Some legitimate but rare situations may exist that indicate a combined delivery, but generally it is wise to avoid using both instruments. Combined deliveries have the highest risk of maternal and fetal morbidity. Once you select forceps or vacuum as a delivery instrument and place and provide any traction, avoid switching methods.