

PROPOSED VACUUM PROTOCOL***

Prerequisites

Informed consent

An informed consent is a process, not simply a signed form. For instrumental delivery, a proper informed consent includes an explanation of the need for the operation, a discussion of risks and benefits, and a presentation of alternative modes of treatment. Furthermore, the parturient must have the opportunity to ask questions. In its entirety, the consent process may strike the clinician as being excessively time consuming and unrealistic, especially in the face of urgency.

Obviously, in most instances, a bedside consent process is abbreviated. In all situations but extreme emergencies, there should at least be sufficient time to briefly describe the proposed operation and to indicate the limits of effort intended to the patient.

Because of the difficulties of obtaining bedside consents from laboring patients, discussing possible obstetric interventions with families at an earlier time during the pregnancy is prudent; thus, when these data are presented during labor at the time of intervention, they are not entirely new or unanticipated.

Prepared physician

The clinician must have knowledge of the instrument chosen and of vacuum indications and proven techniques. Specifically, this preparation includes the willingness to abandon an operation if it proves difficult.

Prepared patient

Prior to considering a VAVD, the patient should have ruptured membranes; an empty bladder by Credé, catheterization, or spontaneous voiding; full cervical dilation; an engaged fetal head; known position of the fetal head, and no suspicion of feto-pelvic disproportion.

Acceptable analgesia/anesthesia

While some operative vacuum deliveries can be conducted under a "local and vocal" with a willing gravida, most parturients find operative vaginal procedures uncomfortable. Either a regional (eg, pudendal block) or a major conduction anesthetic (eg, epidural, spinal) may be required.

Indications

Prolonged second stage of labor

Clinical studies before the 1970s suggested that the risk of fetal morbidity and mortality was higher with a prolonged second stage of labor; however, studies involving almost 36,000 parturients found no direct relationship between the length of the second stage and infant mortality or morbidity. These data indicate that a prolonged second stage, according to American College of Obstetricians and Gynecologists (ACOG) criteria, is not an indication for immediate operative intervention unless the maternal or fetal status becomes bothersome or progress ceases.

Do not ignore tardy progress. Poor progress requires caution because cranial malpositioning, deflection, asymmetries, or true fetopelvic disproportion could be present. The safety of an extended second stage depends upon close maternal or fetal monitoring, with judicious intervention as required. Therefore, an extended second stage is a relative, but not absolute, indication for obstetric intervention.

Shortening of the second stage of labor

On occasion, shortening the second stage of labor is appropriate. Maternal disorders (eg, cardiac, cerebrovascular, or neuromuscular conditions) in which voluntary expulsive efforts are limited. Additional situations that may lead to intervention include the vastly overdiagnosed condition of maternal exhaustion.

Presumed fetal jeopardy/fetal distress

While a potentially distressed infant is a classic indication for operative intervention, this is the setting in which extra caution is indicated. Operative heroics have no place in obstetric management. The means for diagnosis of presumed fetal jeopardy are imperfect, except in extreme instances such as fixed bradycardia or cord prolapse. When prompt delivery is indicated, station and position of the fetal head, the fetopelvic relationship, operator skill, and judgment of the degree of jeopardy dictate the mode of delivery. For most practitioners, cord prolapse, abruptio placentae, or persistent bradycardia at a high station, even at full dilation with an engaged head, are best managed by cesarean delivery.

Nonetheless, expedited vaginal delivery using vacuum (or forceps) is appropriate in carefully selected cases of rapidly progressing labor when pelvic adequacy is good, the parturient is willing and able to assist, and an experienced surgeon is present. Many of these applications are best conducted as trials, as described below.

Trials of instrumental delivery

A trial of instrumental delivery is an operation in which delivery is indicated and the vaginal route remains a possibility, but the outcome is uncertain. In this type of

procedure, the most experienced clinician remains at the perineum, encouraging maternal efforts of bearing down and assisting with an instrument, while other personnel simultaneously prepare for an urgent cesarean delivery. If the vacuum delivery does not proceed easily with descent of the presenting part beginning subsequent to the initial traction effort, the attempt at instrumentation is abandoned and a cesarean delivery is performed.

Contraindications

- Operator inexperience
- Inability to achieve a proper application (flexing median application)
- Inadequate trial of labor
- Uncertainty concerning fetal position/station
- Suspicion of feto-pelvic disproportion
- High fetal head
- Malpositioning (eg, breech, face, brow)
- Known or suspected fetal coagulation defect
- Prior failed forceps
- Prematurity (fetuses <36 wk gestation)
- IUGR (fetuses <2500gms)

*****NOTE:** *This protocol should be reviewed by the hospital attorneys and departmental chairs prior to its utilization.*