

## Great Valley Ob/Gyn

### Elective Cesarean Delivery

If you are thinking of having a Cesarean section delivery even though there are no medical or obstetrical reasons to avoid vaginal delivery, we would like you to consider the following information to help you make your decision.

Compared with a vaginal delivery, planned C-section is associated with a higher risk of infection (wound, urinary tract, uterine, blood and/or lung), injury (to bladder, ureter, intestine, major nerves, blood vessels and/or other organs), and thrombo-embolic events (blood clots in leg or pelvic veins that may break off and go to the lung, stroke and heart attack). All of these problems can be fatal. Sluggish bowel function post-operatively, or even intestinal blockage requiring additional surgery may occur.

There is less risk of vaginal, cervical or rectal tears with C-section, and anal sphincter disruption can cause anal incontinence. However, whether or not later pelvic floor dysfunction (sexual dysfunction including pain, urinary or rectal incontinence, or genital organ prolapse) is less with planned C-section than with vaginal delivery remains to be determined. Initial differences that are present 3 mos. after delivery may completely disappear in as little as 2 years. In addition, avoidance of mid-line episiotomies and/or the use of forceps can minimize the risk of anal sphincter injury during vaginal delivery. The total number of deliveries, genetic predisposition, age, weight and other non-pregnancy related factors may be as or more important risk factors for future pelvic floor dysfunction than the type of delivery.

Planned C-section allows patients to avoid the pain of labor and decreases the chance of post-partum hemorrhage because there is less likelihood of small fragments of placenta remaining in the uterus. However, the amount of blood loss at the time of the delivery is greater with a C-section. Moreover, epidural anesthesia is another way to minimize the pain of labor and the recuperation after C-section is generally more difficult and prolonged.

Delivery by C-section is correlated with an increased risk of complications in subsequent pregnancies. Therefore, decisions regarding the route of delivery should be influenced by the number of pregnancies expected or planned. Whether or not future vaginal birth (VBAC) is attempted, there is an increased risk of uterine rupture. There is also an increased risk of placenta *previa* (when the placenta covers the opening of the cervix), placenta *accreta* (an abnormal attachment of the placenta whereby the tissue grows into and

sometimes even through the wall of the uterus and into adjacent structures like the bladder) and placental *abruption* (when the placenta partially or totally separates from the uterine wall before delivery of the baby, thereby depriving the baby of oxygen). Placenta *previa* is 1.5 times more likely with one prior C-section, twice as likely with two prior C-sections, and 8.8 times as likely with 4 or more prior C-sections. The risk of placenta *accreta* is increased 8.6 times with two or more prior C-sections. Uterine rupture and/or placental problems as listed above can lead to massive maternal hemorrhage and the possible need for hysterectomy (making it impossible to carry future pregnancies) as well as multiple blood transfusions or even maternal death. Hemorrhage can lead to fetal distress and resultant fetal compromise including severe permanent neurological injury or death. Delivery by planned C-section has been shown to have some benefits for the baby. These include a lower risk of stillbirth because the pregnancies are generally delivered at or shortly after 39 weeks gestation, when most placentas are still functioning optimally. There is a lower incidence of neonatal infection. There is less risk of brachial plexus injury (which causes partial or total paralysis or weakness of the arm/hand). On the other hand, because it is rare, more than 1000 C-sections are needed to prevent one brachial plexus injury. There is a decrease in the risk of intra-cranial hemorrhage and other fetal brain injury related to decreased oxygen delivery to the baby during labor and vaginal delivery. However, Cesarean delivery has never been shown to provide long term protection against cerebral palsy (CP) and it has been estimated that 5000 C-sections would be needed to prevent one case of CP.

C-section delivery is also associated with some extra risks to the baby. There is an increased risk of pre-maturity and its associated complications if the estimated due date is incorrect and the delivery is unintentionally done before 39 weeks gestation. There is a small but greater than zero risk of fetal laceration during C-section, though this is most likely to occur during emergency surgery or when there is decreased amniotic fluid around the baby. There is an increased incidence of transient tachypnea of the newborn (TTN or rapid breathing). Rarely, respiratory distress syndrome (RDS) and pulmonary hypertension can develop. Breast milk production and let down may be delayed after C-section. Babies born by Cesarean are more likely to have a high bilirubin level after delivery and may need light therapy for this.

As with a vaginal delivery, a vacuum may be used to assist in the delivery of the baby's head during a C-section. This rarely results in a fetal scalp laceration or hematoma. There is a possibility that the uterine incision (generally made horizontally), will need to be extended vertically in order to facilitate the delivery. In that case an attempt to have a

vaginal delivery with a later pregnancy is considered too risky because of an increased chance of uterine rupture.

There is an increased risk of incisional endometriosis and/or hernia with C-section. There is also a very small but greater than zero risk of fistula formation (a functioning connection between two organs such as the vagina and the rectum or the vagina and the bladder) whether delivery is vaginal or by C-section.

If future pelvic or abdominal surgery is ever needed, whether for another C-section or for something else, the risk of injury to other organs inherent in having any surgery may be higher due to the formation of scar tissue (adhesions) that the body makes during the healing process after surgery. The needed operative time, and therefore the exposure to anesthesia may be significantly longer for future surgery. Infertility and even chronic pelvic pain may occur following C-section delivery.

Please talk to us about all of your concerns and preferences.