Tips for Third- and Fourth-Degree Repairs

1. Don't forget to **optimize repair conditions** by getting adequate anesthesia, lighting, and exposure.

2. Consider providing 12 to 24 hours of **prophylactic antibiotics**, such as cefazolin, beginning as soon as possible. The literature supports this practice as reducing subsequent infection and breakdown of the repair.

3. If you have limited experience with such repairs, liberally **seek assistance** where such is available.

4. Be sure to **repair all layers and edges as anatomically as possible**. One key to anatomic approximation is to understand and repair the posterior fourchette and its underlying support. The associated videos are good examples of identifying the posterior fourchette and re-attaching the torn sides.

After delivery, the overwhelming majority of lacerations or episiotomies have a basic diamond shape. The top of the diamond is the apex of the laceration in the vagina, and the bottom of the diamond is at the inferior aspect of the perineal laceration. The tips of the two sides of the diamond are at the distal posterior fourchette. With a good anatomic repair, these two side tips of the diamond must be approximated to get a good anatomical result. These tips (lateral apices) can be identified by placing your thumbs above the laceration on the labia majora bilaterally and gently elevating the tissues anteriorly. These lateral apices are also demarked by the transition from the keratinized epithelium of the perineum to the non-keratinized mucosal epithelium of the vaginal introitus. In many women, there is a pigment change at this apex. This pigment transition is most apparent in women with darker skin.

Immediately after approximating the posterior fourchette, the operator then bolsters the posterior fourchette by re-approximating the torn ends of the bulbocavernosus muscles together to the perineal body underneath the epithelium of the posterior fourchette. This is sometimes called a "crown stitch." The two most critical sutures (or suture passes) for an anatomic repair of the perineum with both a good functional and aesthetic result are the closure of the posterior fourchette and the re-approximation of the bulbocavernosus muscles to re-form the perineal body. Overzealous approximation of the bulbocavernosus muscles results in an overly narrow introitus, which causes dyspareunia. On the other hand, failure to properly re-approximate the posterior fourchette and the bulbocavernosus at the apex of the perineal body can result in a disfigured perineum and more difficulty with pelvic floor integrity and function.

The demonstrations in this video series show the operator approximating the torn lateral apices of the diamond-shaped laceration, as described above, prior to closing

the perineal body. This approach is recommended over a more traditional approach where the apex of the perineum and posterior fourchette are closed near the end of the repair if at all. This approach is most helpful in repairing mediolateral episiotomies and spontaneous lacerations because the mediolateral is always asymmetric by definition, as are most spontaneous lacerations. Closing the posterior fourchette first reduces the incidence of painful granulation tissue in the posterior fourchette. This granulation tissue is probably the result of failure to approximate the posterior fourchette when the suture used for the epithelial closure of the perineum transitions from the apex of the perineum back inside the vagina above the hymen for the final knot. This is typical of a more traditional repair, but note that the posterior fourchette is not specifically closed using this technique.

Further argument for closing the posterior fourchette early in the repair, just after closing the vagina to the level of the hymen, has to do with the asymmetry of mediolateral and spontaneous lacerations. With traditional repairs, as the perineal closure proceeds from inferior toward the apex, the asymmetry of the laceration can result in the perineum being sewn to one side of the hymen. This is disfiguring and results in a gaping and dysfunctional introitus. The result has negative impact on sexual function and pelvic floor integrity. Some women seeking so-called “vaginal rejuvenation” have a gaping introitus that may be due to a suboptimal repair.

Skilled surgeons who do not close the posterior fourchette early can overcome the asymmetry of mediolateral and asymmetric spontaneous lacerations by approximating the bulbocavernosus muscles well, and by taking longer bites on the longer side of the laceration while taking shorter bites on the shorter side of the laceration.

5. Women who have had third- or fourth-degree lacerations should seek the advice of an experienced obstetrician or Maternal-Fetal Medicine specialists for an evaluation and recommendations regarding the **route of delivery in subsequent pregnancies**. In some cases, delivery by cesarean may be recommended.