

# *Not your mother's "bladder tack"*

**M**any women come into my office having had a "bladder tack." The bottom line is that until I read the operative report, most women have no idea of what was done to them. A lot has happened in the past ten years to radically change the approach to a urethropexy (aka bladder tack), with significant improvements in results, predictability, and durability. More dramatically, in patients just having a urethropexy, an outpatient procedure can often be done. Hopefully, this article will shed some light to help women make the proper decision for having this type of surgery.

Before the 1990s there were three main types of surgical procedures: anterior repairs, needle procedures, and retropubic urethropexies. The first two types did not work; five year success rates were below 30%. But there is a bright side, retropubic urethropexies were successful, and durable, with cure rates around 70% at the five year mark. Women paid a price for these procedures, since it usually meant major surgery with an incision on the lower abdomen. Laparoscopy improved the procedure, with smaller incisions and less time off from work. Unfortunately, not all physicians could perform the procedure; it took longer to perform in the operating room and required significant skill. Only physicians who had a significant volume of patients routinely performed a laparoscopic urethropexy, so the procedure never obtained widespread acceptance.

In the 1990s, two Swedish physicians finished work on developing a new twist on an old procedure. Traditional slings placed material around the urethra and were supported to the anterior abdominal wall. This required general anesthesia, an abdominal incision and four to six weeks off from work. The "new" sling could be done as an outpatient under local anesthesia and with incisions less than a quarter of an inch. The new procedure, called the TVT (Tension-free Vaginal Tape), radically changed the way female urinary incontinence was treated.

The heart of the procedure was a small strip of mesh that went under the urethra and attached to the abdominal wall. The mesh was synthetic, which meant that it did not dissolve. As the procedure gained momentum, complications from the synthetic mesh began to appear. The initial procedure was changed by some to incorporate biological material instead of the mesh. The idea was that the biological material

would be less likely to erode. This was not the case.

Synthetic material is made in the lab and is antigen-free. Biologic material is derived from other animals and is greater than 99% antigen free. Unfortunately, when something contains millions to billions of antigens, less than 1% is still a good probability that antigens may be lingering in the tissue. It only takes a few antigens for your body to identify this tissue as foreign and begin to reject it. Some patients who had biologic slings placed began to experience what appeared to be rejection of the material. The success rates also did not appear to be equal. In a number of studies comparing biologic to synthetic material for pelvic reconstruction, the synthetic material has been proven to be the clear winner. Unfortunately, physicians are still placing biologic slings in spite of this data.

Surgeons took off in several directions with the new sling procedure. Because of the high rate of injuring the bladder with the retropubic TVT procedure, a new technique was developed using the same strip of synthetic mesh that came out more to the side of the pelvis. This procedure pierced the obturator muscles of the pelvis and was given the name of TOT (TransObturator Tape). Both procedures are popular and utilize very small incisions to accomplish dryness. Patients undergoing either procedure can expect a cure or improved dryness rate in excess of 85%.

As more and more patients were cured of their incontinence from these new sling procedures, surgeons attempted to perform a single incision sling using a thin strip of mesh. From the patients' standpoint, there would be no incision, since the surgery would be inside the vagina. While the single incision concept was an FDA approved device, there was little data on outcomes and complications. Essentially, patients and physicians were "flying blind" into this new surgical procedure, which was suppose to be new and improved. As the data trickled in, it was new, but not improved. Success rates with the "best" surgeons were just above 60%. As of this writing, the data on single incision slings is not encouraging; I do not recommend it to my patients. Patients should remember that just because a device has the FDA stamp of approval, there may be little or no data on how well the device works in a surgical setting.

*Contributed by T. Fleming Mattox, MD, Carolina Continence Center.*