

Patient Mesh Considerations

Not all anterior compartment prolapses (cystoceles) are the same. They differ in terms of type, degree, symptoms, and bother. The *lateral* type is a detachment of the bladder from the pelvic sidewalls—this usually causes only a modest degree of prolapse. The *central* type is a central weakness of the support tissues of the bladder that can cause a very pronounced degree of prolapse. Most women have a combination of these two types, a *combined central-lateral* type.

In my opinion, the classical “plication” repair (sewing together) of native tissues—aka *colporrhaphy*—is best suited to a central cystocele in which there are satisfactory native tissues present; however, this will not adequately address a lateral defect cystocele or combined cystocele. Thus, it is very important to precisely determine the type of cystocele present in terms of repairing it with native tissues.

One of the advantages of a mesh repair is that it can address all three types of cystocele. Factors influencing me to do a mesh repair over a classic colporrhaphy are the following: poor tissues on dissection; risk factors for recurrence including chronic constipation, cough, obesity, and occupations that require a lot of manual labor, etc.; a relatively young patient who will need a repair that is very durable; and those who have already failed a native tissue repair.

In the properly selected patient operated on with the appropriate surgical technique, the results of mesh repairs have been extraordinarily gratifying and nothing short of a paradigm shift. This procedure passes muster and the “MDSW” test—meaning I would readily encourage my mother, daughter, sister or wife to undergo the procedure if the situation called for it.

When performed by a skilled pelvic surgeon, the likelihood of cure or vast improvement is very high. Meshes are strong, supple and durable and the procedure itself is relatively simple, minimally-invasive and amenable to an outpatient basis. When patients are seen several years after a mesh repair, their pelvic exams typically reveal restored anatomy with remarkable preservation of vaginal length, axis, caliber and depth.

Meshes act as a scaffold for tissue in-growth and ultimately should become fully incorporated by the body. I like to think of the meshes in a similar way to backyard chain-link fences that have in-growth of ivy. Meshes examined microscopically years after implantation demonstrate a dense growth of blood vessels and collagen in and around the mesh.

As compared to classic plication, when a mesh is used for bladder repair, there is rarely any need for trimming of the vaginal wall, which makes for a very anatomical repair in terms of vaginal preservation. Another advantage of the mesh repair is that if the patient has a mild-moderate degree of uterine prolapse accompanying the cystocele, the base of the mesh can be anchored to the cervix

and thus provide support to the uterus as well as the bladder, potentially avoiding a hysterectomy.

In my opinion, the keys to success are the following: estrogen cream pre-operatively in the post-menopausal patient; intra-venous and topical antibiotics; a small vaginal incision; good surgical exposure; careful technique making sure the mesh is anchored at the appropriate anatomical sites; trimming the mesh to use the least mesh load possible; avoiding mesh folding, redundancy and tension; and vaginal packing and oral antibiotics post-operatively.

The bottom line is that mesh repairs for pelvic organ prolapse have been revolutionary in terms of the quality and longevity of results—a true game-changer. They represent a dramatic evolution in the field of female urology and urological gynecology, offering a vast improvement in comparison to the pre-mesh era.

That said, they are not without complications, but the complication rates should be reasonably low under the circumstances of proper patient selection, a skilled and experienced surgeon performing the procedure, proper surgical technique, utilization of the optimal mesh and proper patient preparation. Three factors are integral to proper mesh integration: *mesh factors, patient factors and surgeon factors*.

The gold standard mesh is a piece of large-pored, elastic, monofilament polypropylene—any other synthetic can result in integration issues. This has been the standard for sling surgery as well, and time has proved this to be the best synthetic mesh. It has been used for years by general surgeons for mesh hernia repairs and as a suture for closure of the abdominal wall.

Patient considerations are very important as risk factors for integration problems include the following: compromised or poor-quality vaginal tissues; diabetes; patients on steroids; immune-compromised patients; radiated tissues; and tobacco users.

Foremost, a well-trained, experienced surgeon should be the one doing the mesh implantation. The surgeons most skilled at this type of surgery are those who have undertaken fellowship training in female pelvic medicine and reconstructive surgery after completion of their urology or gynecology training. It is sensible to check if your surgeon is specialized, and if not, at least has significant clinical experience doing mesh procedures. It is particularly important that the surgeon performing the mesh implant is capable of taking care of any complications that may arise.

Many of the problems that have occurred are not intrinsic to the mesh itself, but are potentially avoidable issues that have to do with either the surgical technique used to implant the mesh or to patient selection. Complications such as mesh

exposure do occur in a small percentage of patients but are most often quite manageable.

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