M.D. Update
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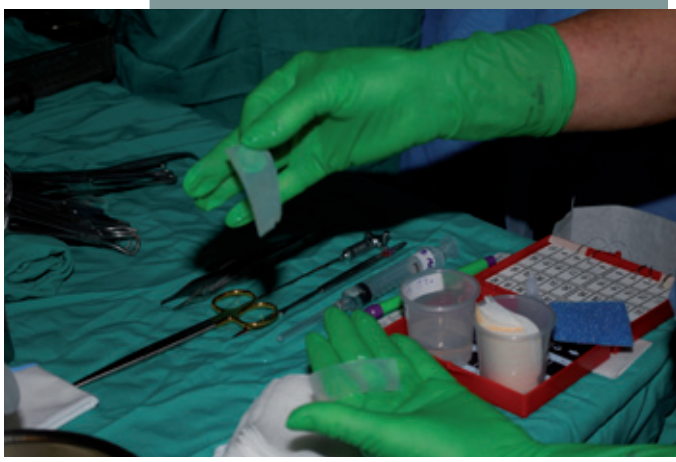
LEFT: Dr. Karon credits her team for the success of daVinci robotic surgery. From left: Karri Doneghy, surgical tech, Chris Arvin, physician assistant, Hope Hagins-Cornett, surgical tech, Dr. Magdalene Karon
ABOVE:Dr. Karon has performed over 450 robotically assisted surgeries
BELOW: Dr. Karon uses an acellular matrix sheet for sacrocolpopexy and paravaginal defect repair.

New Techniques Elevate Pelvic Organ Prolapse Repair



BY JENNIFER S. NEWTON

LEXINGTON Pelvic organ prolapse has been a hot topic in the field of OB/GYN over the last five years, in part due to the notoriety of some surgical repair techniques. But from the ashes of problematic methods such as vaginal mesh has risen a phoenix of sorts in the form of new diagnostic and surgical techniques that are producing optimum results.

"For years, some vaginal surgeries have been the standard of care [for pelvic organ prolapse], but we've always known vaginal repairs have not been as strong as abdominal approaches," says Magdalene Karon, MD, an OB/GYN and solo practitioner in Lexington. The downside to the abdominal approach is greater trauma to the patient because it requires a large incision and a much more difficult recovery. "Now that we can do [pelvic organ prolapse repair] laparoscopically and as an outpatient, we are turning more towards abdominal prolapse repair laparoscopy, especially with the da Vinci® Surgical System. The patient will have faster recovery that way and less vaginal trauma," says Karon.

According to Karon, pelvic organ prolapse "basically involves the descent of different organs in the pelvis, such as the bladder, uterus, and vaginal walls in a downwards direction." The most common cause of prolapse is obstetrical injuries from the trauma of large babies or multiple deliveries, but family predisposition, lifting heavy objects, obesity, and estrogen deficiency in menopause are also contributing factors.

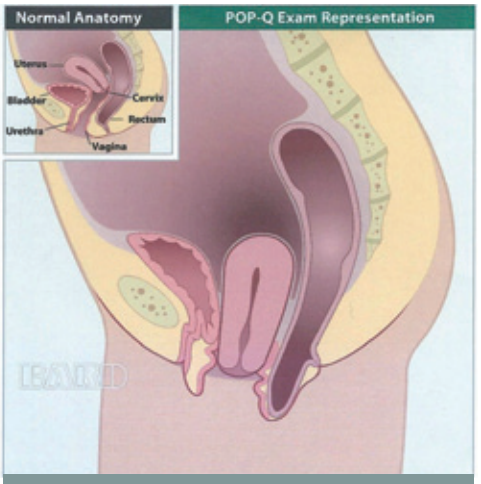
The most common symptom for women is stress urinary incontinence, which conventional wisdom typically assigns to elderly women but Karon says is more and more common at younger ages, where women are more likely to discuss problems with their doctor.

Diagnosing Pelvic Organ Prolapse

Listening to a patient's symptoms during the consultation and doing pelvic exams are still part of the protocol of diagnosing pelvic organ prolapse. In addition to stress incontinence, complaints often include a feeling of a bulging or protrusion in the vagina or pressure when standing up. However, vaginal

Regina Ramsey, surgical tech, has been a key member of Karon's surgical team for years.

ultrasound has become an important component in documenting the prolapse and mapping out the anatomy in each individual case. "We can see the angle of the bladder drop that is funneling. We can measure the thickness of the bladder, see the cystocele, which is the part of the bladder that drops down. We can see torn muscles such as in the paravaginal defect," says Karon. "We also use Doppler, which is a vascular flow study, so we can see if a structure has a good blood supply or not or if it's been devascularized. With 3D and 4D ultrasound, it gives us another dimension to see pelvic floor damage and the relationship of the uterus and the bladder and the other structures."



Pelvic Organ Prolapse Evaluation
Exam representaton based on the Pelvic Organ Prolapse-Quantification (POP-Q) System.

Non-Surgical Treatment

Treatment begins postpartum when nurses advise new mothers to do Kegel exercises to regain muscle control. In some cases, physical therapy and advising patients to stop lifting heavy objects are the least invasive options. For patients where surgery is not an option, especially older patients, Karon still uses pessaries. A rubber, flexible ring that works in principle like a diaphragm, a pessary supports vaginal structures, although it does not provide birth control.

In post-menopausal women, hormone replacement therapy utilizing estrogen can help. "Estrogen is the hormone that helps with vaginal wall thickness and moisture, pinkness and blood supply. The bladder also has a lot of estrogen receptors in it," says Karon. "The vaginal estrogen does help with the atrophy because after menopause there's the dryness and thinning of tissues … Supplementing with hormones can help if they're borderline with prolapse issues. Once the bladder is fallen to a certain point, then it needs to be repaired surgically," says Karon.

Surgical Prolapse Repair

Because she says women are visual, Karon uses a computer to map out each patient's prolapse to see which part is prolapsing and forming the cystocele and help educate patients on the treatments she will use. She no longer uses vaginal mesh because of the complications it has caused, but more importantly, because newer, more effective techniques are available. "I've used fascia for prolapse, and most recently I've used a product that's based on tissue regeneration with your own stem cells," she says. The product is a sterile, porcine-derived, acellular (with all animal cells removed) matrix sheet, absorbable over six months, that attracts stem cells, supports healing, and strengthens and remodels the area. Karon has been using it for about a year and likes the device because the sheets come in different thicknesses and different lengths, so it can be used for sacrocolpopexy, paravaginal defect repair, and in the Burch procedure for bladder lift. The patches are designed to withstand a lot of pressure, which is essential while the tissue is healing.

Taking laparoscopic techniques a step further, Karon utilizes the da Vinci robotic system, which uses wristed-instruments and 3D visualization to enhance surgical precision and dexterity. With it, her patients experience small abdominal incisions enabling shorter recovery times, less trauma, and fewer complications. Dr. Karon has performed over 450 robotically assisted surgeries. ◆

For patient referral contact

Dr. Magdalene Karon

160 North Eagle Creek Drive,
Suite 205, Lexington, KY 40509

(859) 277 3135

www.karonmd.com