

## **National Institute of Child Health and Human Development: Combined Surgery for Pelvic Organ Prolapse and Incontinence**

*NICHD-supported investigators showed that continent women with advanced prolapse who received a procedure to prevent stress incontinence (called the Burch colposuspension) at the same time that abdominal sacral colpopexy is performed to correct prolapse, reduced postoperative symptoms of stress incontinence.*

### **Lead Agency:**

Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) /National Institutes of Health (NIH)

### **Agency Mission:**

The mission of the NICHD is to ensure that every person is born healthy and wanted, that women suffer no harmful effects from reproductive processes, and that all children have the chance to achieve their full potential for healthy and productive lives, free from disease or disability, and to ensure the health, productivity, independence, and well-being of all people through optimal rehabilitation.

### **Principal Investigator:**

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### **General Description:**

#### **Combined Surgery for Pelvic Organ Prolapse and Incontinence**

By performing two surgical procedures during the same operation, researchers in NICHD's Pelvic Floor Disorders Research Network reduced the incidence of urinary incontinence by half in women with a condition known as pelvic organ prolapse. Ordinarily, a single surgery is performed to correct pelvic organ prolapse, and a second surgery is performed only if incontinence develops.

Pelvic organ prolapse occurs when the pelvic muscles and connective tissue within the pelvic cavity weaken or are injured. The tissue ordinarily supports the vagina and

holds it in place within the pelvis. Without normal support, however, the uterus, bladder, and bowel press down on the vagina, causing it to invert and, in some women, these organs eventually protrude through the vaginal opening. With advanced pelvic organ prolapse, the vaginal protrusion may cause a kinking of the urethra, blocking the flow of urine and preventing the bladder from emptying completely (called partial retention). This retention, in turn, may lead to frequent or persistent urinary tract infections. In other cases, depending on the individual, pelvic organ prolapse may occur along with stress incontinence- urine leakage from the bladder during a cough or a sneeze.

To treat pelvic organ prolapse, gynecologists may recommend that patients have a surgical procedure known as sacrocolpopexy. In this procedure, surgical mesh and sutures are used to anchor the vagina to the sacrum. However, after sacrocolpopexy, many women experience incontinence, which makes them candidates for a second surgical procedure, the Burch colposuspension. With Burch colposuspension, additional sutures are sewn through the wall of the vagina and anchored to ligaments inside the pelvic cavity, near the pubic bone.

The Network investigators undertook a study to determine if proactively performing the Burch colposuspension at the same time as sacrocolpopexy might prove effective at preventing incontinence in women with prolapse who did not have symptoms of stress incontinence before surgery. For their study, with the women's consent, the researchers randomly assigned women who were undergoing sacrocolpopexy to receive either Burch colposuspension or no additional surgery. Three months after their surgery, the women were evaluated according to standardized criteria for urinary stress incontinence. These criteria measured incontinence that occurred in response to such activities as coughing, sneezing, laughing, physical exercise, lifting, or bending over. Of the Burch group, 23.8 percent met one or more criteria for stress incontinence. In comparison, of the group that underwent sacrocolpopexy alone, 44.1 percent met one or more criteria for stress incontinence.

***Excellence:*** What makes this project exceptional?

Pelvic organ prolapse is a common problem among older women that can lead to major surgical treatments. Women who do not have urinary stress incontinence before the surgery to treat pelvic organ prolapse may develop incontinence after the surgery. The research findings definitively resolve the question of whether performing a procedure to prevent postoperative stress incontinence (Burch colposuspension) at the same time as a procedure to treat pelvic organ prolapse (sacrocolpopexy) improved outcomes compared to performing the surgery to correct the prolapse alone.

***Significance:*** How is this research relevant to older persons, populations and/or an aging society?

By performing both procedures at the same time, women may both avoid a second surgery and maintain their quality of life after surgery.

***Effectiveness:*** What is the impact and/or application of this research to older persons?

In many cases, clinicians have adopted principles of care and surgical techniques before rigorous, objective, controlled evaluation has been conducted. The study findings enable healthcare providers to recommend an evidence-based treatment that not only remedies pelvic organ prolapse, but also prevents post-operative urinary incontinence.

***Innovativeness:*** Why is this research exciting or newsworthy?

Pelvic organ prolapse is a common problem among older women that can lead to major surgical treatments. Women who do not have urinary stress incontinence before the surgery to treat pelvic organ prolapse may develop incontinence after the surgery. The research findings definitively resolve the question of whether performing a procedure to prevent postoperative stress incontinence (Burch colposuspension) at the same time as a procedure to treat pelvic organ prolapse (sacrocolpopexy) improved outcomes compared to performing the surgery to correct the prolapse alone.