Tissue Suspension for Stress Urinary Incontinence

Summary

Stress Urinary Incontinence (SUI), or the involuntary loss of urine, is a condition that affects approximately 10-20% of females. SUI may occur due to weakened or stretched pelvic muscles, with common risk factors including childbirth and pelvic surgery. When behavior and medication therapies are ineffective, surgical intervention may be necessary to treat SUI. This technology is a novel minimally invasive tissue suspension device that may be an alternative to existing treatment options including mesh and sling products. The device is implanted without prior incision, and is designed for superior tissue fixation and enhanced patient safety.

Key Investigator
Erin Bird, MD, MBA

Field
Urology

Technology
Minimally Invasive Tissue Suspension Device for the Treatment of Stress Urinary Incontinence in Females

Key Features
- Minimally invasive
- Eliminates need for prior incision
- Novel alternative to existing technology for patients and surgeons

Stage of Development
Preclinical, Prototype

Status
Available for licensing

Patent Status
Pending Application
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Market

Urinary incontinence (UI) is the loss of bladder control. Up to 50% of women will be diagnosed with some form of UI during their lifetime, which can be associated with serious psychological and physiological consequences. Stress Urinary Incontinence (SUI) is the most common form of UI in women. It is estimated that SUI affects 15 million women in the U.S. alone. Billions of dollars are spent each year to treat SUI and improve patients' quality of life. When behavioral and medication therapies fail, women may seek corrective surgery—an option chosen by approximately 4% to 10% of women with SUI. Existing surgical interventions, including those using mesh and sling products, may not be appealing to some patients given their potential need for prior incision or risk for adverse effects, including pain, mesh erosion through the vagina, and increased likelihood for urinary tract infections.

Technology

This technology is a novel minimally invasive tissue suspension device for the treatment of SUI in females. The device is implanted without prior incision, thus reducing surgical risks and enhancing patient safety. The unique device design features multiple points of fixation to maximize tissue contact and reduce undesired tissue movement. One or multiple devices may be implanted until the desired tissue suspension is achieved. The device is implanted trans-vaginally using an accompanying insertion tool.

A prototype device was created to conduct cadaver testing and show proof of concept.

One embodiment of apparatus to deploy one or more fixation devices to suspend tissue.