

1195

Serels S<sup>1</sup>

1. Bladder Control Center Of Norwalk

## **CADAVERIC ASSESSMENT OF IMMEDIATE PULL OUT STRENGTH OF THE THREE COMMON SYNTHETIC SLING APPROACHES: SINGLE INCISION, RETROPUBIC, AND TRANSOBTURATOR**

### Hypothesis / aims of study

To assess the immediate pull out force of three commonly used synthetic sling approaches (i.e. retropubic, transobturator, single incision) in the cadaveric setting. The hypothesis was that Solyx™ Single Incision Sling (SIS) System would have a greater pull out force than the others because it is anchored using polypropylene carriers while the retropubic and transobturator slings rely solely on the friction between the mesh and the muscle to provide the holding force.

### Study design, materials and methods

A Solyx™ SIS, an Obtryx® Transobturator Sling, and an Advantage® Retropubic Sling were each placed in 9 separate cadavers via mid-urethral incisions using standard protocol. The slings were then cut in the middle and each side was pulled out separately using a force gauge. This allowed for 18 data points for each sling type.

### Results

The mean pull out force for the Transobturator, Retropubic, and Single Incision Sling were 1.50, 1.84, and 3.61 pounds of force respectively. There was no statistically significant difference between the Retropubic and Transobturator slings ( $p=0.122$ ). There was a statistically significant difference between the Solyx Single Incision Sling and both the Retropubic ( $p=0.0285$ ) and Transobturator slings ( $p=0.0103$ ). The mean pull out force for the Solyx™ SIS was 3.60 on the left side and 3.63 on the right side, providing no statistical difference ( $p=0.90$ ). The left side was the 2<sup>nd</sup> side placed in the Solyx™ SIS.

### Interpretation of results

This data demonstrates a statistically significant difference in the immediate pull out force of the Solyx™ SIS versus both the Transobturator and Retropubic slings. This improved pullout force is likely due to the polypropylene carriers which embed in the obturator internus muscle with the single incision sling while the other slings are held in the muscle by the friction of the synthetic mesh material.

### Concluding message

The application of these findings to the clinical setting, with regards to a shorter patient recovery time or improved outcomes, should be a future area of study.

<b><i>Specify source of funding or grant</i></b>	<b>restricted grant from Boston scientific corporation</b>
<b><i>Is this a clinical trial?</i></b>	<b>No</b>
<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>No</b>
<b><i>This study did not require ethics committee approval because</i></b>	<b>it was a cadaveric study</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>Yes</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>No</b>