

CADAVERIC ASSESMENT OF SYNTHETIC MID-URETHRAL SLING PLACEMENT

Hypothesis / aims of study

To prove that mid-urethral synthetic slings are visually the same against the urethra at the end of a procedure regardless of the fact that they may be placed by different methods, anchored to different muscles and tensioned by different methods. To evaluate which sling placement was tensioned most correctly and was most likely at the mid-urethra.

Study design, materials and methods

We placed an obturator sling, retropubic sling, and a single incision sling in three different fresh cadavers. Each sling material was the same (i.e. Advantage mesh by Boston Scientific Corporation). Each cadaver had all possible skin incisions made. The tension for the obturator and retropubic slings were set using a 12 Hagar dilator as a spacer. The tension of the single incision sling was set so that the sling lay against the urethra such that pillowing of the periurethral tissues were observed through the pores of the sling. After the slings were placed, 30 physicians were allowed to visually inspect the cadavers without being aware of how the slings were placed. Each physician completed a questionnaire. The physicians were asked to state what type of sling was placed (retropubic, obturator, or single incision), if the sling was the right tension (too tight, just right, too loose), and if it was located at the mid-urethra or bladder neck.

Results

The physicians were composed of 5 urologists, 7 urogynecologist, and 18 general gynecologists. The average number of slings performed per year by each physician was 53. There were 13 physicians who mostly did obturator slings, 11 who mostly did retropubic slings, and 2 who did mostly single incision slings. There was 1 who used all slings, 1 who used primarily obturator and retropubic, 1 who used retropubic and single incision slings, and 1 who was training to do slings. The findings are summarized in the table below:

| | Retropubic sling | Obturator sling | Single incision sling |
|---|-------------------------|------------------------|------------------------------|
| % Who correctly identified sling | 40% | 43% | 23% |
| % Who thought tension was just right | 33% | 47% | 73% |
| % Who thought sling was at mid-urethra | 50% | 67% | 83% |

Interpretation of results

More than half the physicians could not tell which sling was placed in what manner. Physicians were least likely to be able to identify a single incision sling placement. The single incision sling whose tension was not set with a spacer was felt to have the most appropriate tension and was felt to most likely represent a mid-urethral placement.

Concluding message

This study showed that after placement of a mid-urethral synthetic sling it is hard to tell how the sling was placed. Furthermore, this study showed that most physicians felt that the sling that was tensioned the best and most likely at the mid-urethra was the single incision sling.

| | |
|---|---|
| Specify source of funding or grant | this study was funded in part by boston scientific corporation |
| Is this a clinical trial? | No |
| What were the subjects in the study? | NONE |