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ARTIFICIAL URINARY SPHINCTER IMPLANTATION IN WOMEN WITH STRESS URINARY INCONTINENCE: PRELIMINARY COMPARISON OF THE ROBOT-ASSISTED AND OPEN APPROACHES

Hypothesis / aims of study
We aimed to compare the outcomes of open and robot-assisted artificial urinary sphincter (AUS) implantation in female patients.

Study design, materials and methods
The charts of all female patients who underwent an AUS implantation between 2008 and 2016 in a single-center were retrospectively reviewed. From 2008 to 2012, AUS were implanted using an open approach and from 2013 to 2016 using a robot-assisted approach. Perioperative and functional parameters were compared between groups. The primary endpoint was the continence status.

Results
Twenty-six women were included: 16 in the open group and 10 in the robot-assisted group. Three patients had neurogenic stress urinary incontinence. Most patients had undergone previous procedures for urinary incontinence (15 in the open group and 9 in the robotic group). Mean operative time was similar in both groups (214 min vs. 210 min; p=0.76). Postoperative complications rate was lower in the robot-assisted group (25% vs. 75%; p=0.02). There was a trend towards lower intraoperative complications rate (40% vs. 56%; p=0.68), decreased blood loss (17 ml vs. 275 ml; p=0.22) and shorter length of stay (3.9 vs. 9.3 days; p=0.009) in the robot-assisted group. Continence rates were comparable in both groups (75 % vs. 68.8 %; p=0.75). Three AUS explantations were needed in the open group (18.8 %) compared to 1 in the robot-assisted group (10 %; p=0.55).

Interpretation of results
In female patients, the robot-assisted approach compared to the open AUS implantation could decrease intraoperative and postoperative complications rates, length of stay, and blood loss.
The major flaw of the present series is the very limited sample size that prevents to draw definitive conclusions from this report as the small sample size resulted in low statistical power for most comparisons. The robot-assisted approach might possibly decrease the volume outcome relationship in AUS implantations in women.

Concluding message
In female patients, the robot-assisted approach compared to the open AUS implantation could decrease intraoperative and postoperative complications rates, length of stay, and blood loss.

Disclosures
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