

ROBOT-ASSISTED IMPLANTATION OF ARTIFICIAL URINARY SPHINCTER IN WOMEN: STANDARDIZATION OF THE SURGICAL TECHNIQUE

Introduction

The main drawback of the artificial urinary sphincter (AUS) in women is the technical complexity of its implantation. Over the past two years, several french teams have reported their preliminary experience of robot assisted AUS implantation in female patients. The aim of this video was to describe a standardized technique of robotic AUS implantation in women.

Design

In an academic department of urology, over 12 consecutive cases, a standardized technique of robotic AUS implantation in women has been developed in order to facilitate its reproducibility. This technique is described with emphasis on the tips and tricks that can be use to facilitate the shorten the learning curve.

We present the case of a 74-year-old female patient with a history of laparoscopic sacrospinofixation and cauda equina syndrome secondary to L3 fracture and who presented with urinary incontinence due to neurogenic intrinsic sphincter deficiency loss of urethral mobility, a negative Marshall/Bonney test, an urethral closure of 17 cm H₂O.

Results

The procedure is performed by two surgeon: a robotic surgeon and another surgeon to provide assistance. The patient is placed in a 23 ° Trendelenburg position. The implantation is performed using a transperitoneal approach. The four-arm Da Vinci robot is placed in a right sidedocking position. The Retzius space is dissected until the bladder neck and the endopelvic fascia is opened on both sides of the urethra. The bladder neck is then dissected from the vagina below the periurethral fascia just below the level of the catheter balloon. The assistant surgeon introduce two fingers of his left hand into the vagina to help the dissection. The plane is initiated with cold scissors and then developped using the prograsp forceps, under the digital control of the assistant surgeon who ensure vaginal wall is not entered. At the end of the dissection the bladder is filled with saline stained with methylene blue to verify the integrity of the bladder neck. The bladder dome is not routinely open during the dissectionto verify that the bladder neck is not entered. The bladder neck circumference is measured using a measuring tape which is introduced through the 12mm port. The cuff is then introduced through the 12 mm port and positioned around the bladder neck. The balloon is implanted in the prevesical space via a 3 cm suprapubic incision. The pump is implanted in one of the labia majora using the short suprapubic incision with a subcutaneous passage.

Conclusion

The robot-assisted approach could decrease the morbidity of AUS implantation in female patients and could contribute to balance the presumed volume-outcome relationship associated to this procedure. Standardization of the surgical technique could help its widespread.

Disclosures

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