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ROBOT-ASSISTED VESICOVAGINAL FISTULA REPAIR WITH RECTUS ABDOMINALS FLAP: DESCRIPTION OF THE TECHNIQUE

Introduction

A Vesicovaginal fistula (VVF) is a rare, but devastating complication to women after pelvic surgery. The impact extends to medical, physical, mental, social and sexual aspects of the patients. The predominant cause in industrialized countries is iatrogenic injury to the urinary tract. Other main causes include malignant disease and pelvic irradiation. Treatment is dictated by the magnitude of the fistula, ranging from conservative management, including prolonged bladder drainage, glue/fibrin injections, fulguration to surgical repair. Different surgical techniques have been reported in literature. In salvage attempts to repair, the use of flap is recommended. In the present study we demonstrate the feasibility of vesicovaginal fistula repair with harvesting of rectus abdominals flap by a robotic approach

Design

A 57-year-old female with a recurrent vesicovaginal fistula. She underwent a robotic, converted to open hysterectomy for treatment of low-volume, low-grade uterine cancer. The surgery was complicated by a VVF. After conservative management failed, a robotic converted to open attempt to repair it was performed unsuccessfully. It was reported that there was no intra-abdominal material in the form of omentum or peritoneum for graft interposition.. She was referred for further evaluation after her rapid recurrence. Workup showed a very high fistula in the vaginal vault. We attempted to re-pursue a robotic VVF closure and interposition of rectus abdominis flap due to no other available options for tissue interposition.

Results

Ureteral catheters were placed bilaterally. We Utilized the Davinci™ Xi Robotic platform. Multiple dense adhesions throughout the pelvis were noted and dissected down. The bladder was opened and the fistula was identified. The vagina was dissected free to a distance about 3 cm distal to the vesicovaginal fistula site. The bladder was then further mobilized in order to ensure good distance away from the vaginal opening as well. The vagina was then closed. The bladder was closed watertight in two layers. Attention was turned to the rectus flap harvesting. The robot was undocked and the robot boom was rotated so that we were operating towards the patient's right side. The fourth arm port became the camera port. Two additional robot ports were placed, one in the left lower quadrant and another one in the left upper quadrant as our working arms for dissection of the rectus flap. Rectus flap dissection was carried out under the guidance of a plastic surgeon (AR) using an intraperitoneal anterior sheath sparing technique. The right rectus muscle was mobilized to its lateral border in order to obtain maximum mobility, making sure to leave the inferior blood supply intact. It was transected superiorly near the right costal margin. The flap reached the pelvis easily and under no tension. The robot was undocked, rotated again and docked back into the pelvic configuration. The Flap was then interposed between the closed vagina and bladder, securing in with interrupted absorbable sutures. A 15 Fr Blake drain was left in place and a 20 Fr Foley catheter was left in place for 2 weeks

Conclusion

Robotic harvest and interposition of a rectus abdominus flap is a technically feasible and effective technique with minimal morbidity, and could prove quite useful for a variety of needs in pelvic reconstructive surgery. In the case described here, the patient had a successful outcome done in a minimally invasive approach.

Disclosures

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