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ROBOTIC-ASSISTED ABDOMINAL SACROCOLPOPEXY/SACROHYSTEROPEXY (RASC) – A VIABLE ALTERNATIVE FOR PELVIC ORGAN PROLAPSE REPAIR?

Introduction

Cork University Maternity Hospital welcomed the daVinci Surgical system, developed by Intuitive Surgical, in July 2008 and close to 150 gynaecological procedures have been performed to date. We would like to report our initial experience in performing Robotic Assisted Sacrocolpopexies and Sacrohysteropexies with the use of the daVinci robot. Abdominal sacrocolpopexy has been regarded to date as the gold standard operation for vault prolapse repair(1). However, the new minimally invasive daVinci robot is proving to be a viable alternative.

Design

20 women with POPQ stage III underwent RASC.

In Sacrocolpopexies (15 cases), vaginal and rectal probes are used to facilitate surgical dissection. Vesicovaginal and rectovaginal spaces are opened. The extent of dissection depends on the severity of the prolapse assessed preoperatively. The posterior dissection is extended from the rectovaginal space along the right pelvic side wall to the sacral promontory. Extensive adhesiolysis is not uncommonly performed to mobilise the bowel out of the pelvis, especially in patients with previous pelvic surgery. Patients are admitted the day before the surgery for bowel preparation with Microlax. A naso-gastric tube is also used during the procedure. The preshaped polypropylene mesh is introduced and sutured to the vaginal apex anteriorly and posteriorly with Gore-Tex nonabsorbable monofilament suture. The cephalic end of the mesh is sutured to the anterior longitudinal ligament of the sacrum. Reperitonisation is then done with Vicryl 2.0 covering the full length of the mesh. In Sacrohysteropexies (5 cases), a uterine manipulator is used to antevert the uterus to clearly expose the Pouch of Douglas. The uterosacral ligaments are then dissected after clear identification of the ureters. There must be sufficient dissection between the two to freely perform the plication of the ligaments without causing damage to the ureters. Similarly to sacrocolpopexies, dissection is extended from the rectovaginal space along the right pelvic side wall to the sacral promontory. The uterosacral ligaments are plicated with the use of Gore-tex nonabsorbable monofilament suture, as used in sacrocolpopexies to secure the mesh. At the apex of the ligaments, a stitch is inserted in the body of the cervix. Reperitonisation continues along the pelvic wall towards the sacral promontory. The cephalic end of the suture is secured on the anterior longitudinal ligament of the sacrum.

Results

Mean (range) patient age was 58 (40–70). Mean docking time was 8 (3 – 17) minutes. Mean operating time was 131 (85 – 205) minutes excluding 1 conversion to laparotomy following cystotomy. Other complications included pulmonary embolism. The mean hospital stay for uncomplicated cases (also excluding 1 sacrohysteropexy with anterior & posterior repair requiring 3-day stay) was 1.6 (1 – 4) days. All women were POPQ stage 0 postoperatively and at 1 to 6-month follow-up.

Conclusion

Laparascopic surgery is associated with a long learning curve however with its 3D visualization, enhanced dexterity and greater precision of endowrist instruments, the daVinci robot makes procedures more intuitive, potentially allowing these procedures to be performed be an increasing number of gynaecologists. Early results show that RASC offers short hospital stay and relatively low morbidity. Docking and operating times already reflect a decreasing pattern with time. With functional results similar to conventional techniques(2), this clearly makes RASC a viable alternative for pelvic prolapse repair.

References

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Was informed consent obtained from the patients?	**Yes**