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Adoption, benefits and outcomes of 100 consecutive cases for management of complex, benign pelvic pathologies using the da Vinci Xi Robotic System



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Introduction

The use of robotic surgery in gynaecology has increased exponentially since its approval by the FDA in 2005, particularly in the USA (1,2,3). Uptake in Australia and New Zealand has been more cautious, partly due to the need for high-quality data on outcomes, efficacy and safety. Robotic surgery has demonstrated benefits over conventional laparoscopy in technical precision, performance of complicated cases and surgeon ergonomics however has been associated with higher costs and longer operating time. This study was designed to assess a priori defined outcomes to evaluate the selection criteria, surgical outcomes, operative time, morbidity and the learning curve of robotic surgery performed for a range of complex, benign gynaecological conditions

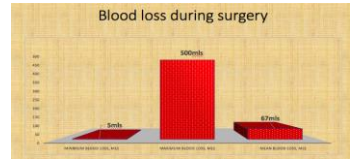
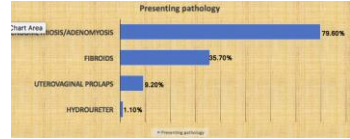
Methods

Retrospective cohort study involving 100 consecutive robotic cases performed at the Centre for Advanced Reproductive Endosurgery in Sydney. All clinical, surgical and pathologic data were retrieved from the electronic database used at the practice.

Results

The surgical procedures included hysterectomy, myomectomy, adnexal surgery, endometriosis surgery and repair of caesarean section defects. All cases were completed successfully with no conversion.

The mean age was 42 years (range from 20 to 73). 29.9% of women underwent a hysterectomy, 14.4% a myomectomy, 62.9% endometriosis surgery and 27.8% an adnexal procedure. There was one contained abdominal wall extraperitoneal haematoma at the time of vasopressin injection at a myomectomy and one uterine perforation at the time of sacrohysteropexy. Post-operatively 2 patients were readmitted (one pelvic abscess and one wound infection). The average operative duration was 190 minutes (range 60-420mins) and the mean estimated blood loss 67mls (range 5-500mls).



Conclusion

This series demonstrates the feasibility, safety and efficacy of robotic surgery for management of complex, benign gynaecological conditions. Familiarity of fundamentals of minimally invasive surgery, conscientious completion of guided and self-directed training, and dedicated team knowledge and skill development are vital for safe and efficient adoption of robotic surgery

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