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Robotic-Assisted Pelvic Surgery: Early Outcomes in a Single Institution

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Abstract

Introduction: This article reports the authors' experience with their first 50 consecutive robotic pelvic procedures, aiming to determine the feasibility and safety of adopting robotic pelvic surgery. Robotic surgery offers several benefits for minimally invasive surgery, but its applicability is hindered by cost and limited regional experience. This study aimed to evaluate the feasibility and safety of robotic pelvic surgery.

Material and methods: This is a retrospective review of our initial experience with robotic surgery for colorectal, prostate, and gynaecologic neoplasia, between June and December 2022. The surgical outcomes were evaluated in terms of perioperative data, such as operative time, estimated blood loss, and length of hospital stay. Intraoperative complications were recorded, and postoperative complications were evaluated at 30 days and 60 days after surgery. The feasibility of the robotic-assisted surgery was assessed by measuring the conversion rate to laparotomy. The safety of the surgery was evaluated by recording the incidence of intraoperative and postoperative complications.

Results: Fifty robotic surgeries were performed over 6 months, including 21 interventions for digestive neoplasia, 14 gynaecologic cases, and 15 prostatic cancers. Operative time ranged from 90 to 420 minutes, with two minor complications and two grade II Clavien-Dindo complications. One patient required prolonged hospitalization and an end-colostomy, deriving from an anastomotic leakage requiring reintervention. No thirty-day mortality or readmissions were reported.

Conclusion: The study found that robotic-assisted pelvic surgery is safe and has a low rate of transfer to open surgery, making it a suitable addition to conventional laparoscopy.

Key words: pelvic neoplasia, robotic surgery, colorectal cancer, prostate cancer, uterine cancer