

The role of Robotics in Gynae-oncology at the North Midlands Cancer Centre

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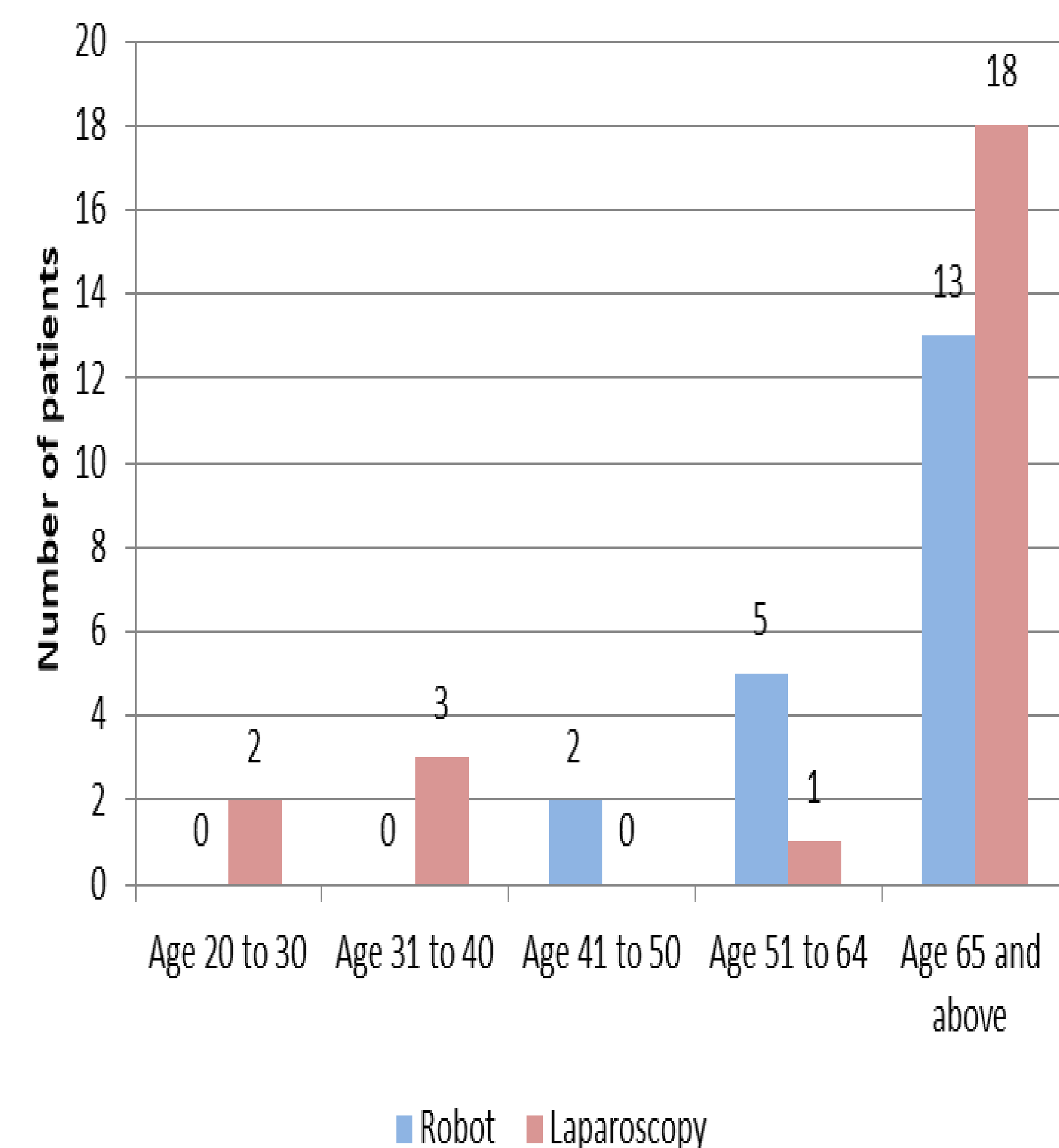
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Introduction

- Innovations with wristed computerised surgical tools led to the use of robotics in surgery.
- Indications for robotic- assisted surgery in gynae-oncology include uterine cancer, early cervical cancer, borderline tumour, early ovarian cancer and selected recurrent cancers.
- Patients who benefit most from robotics include morbid obese; frailty; those who decline blood transfusion; previous pelvic surgery, including midline incision; previous chemo-radiation; frozen pelvis from severe endometriosis or pelvic infection; bulky fibroid uterus and dense adhesions.

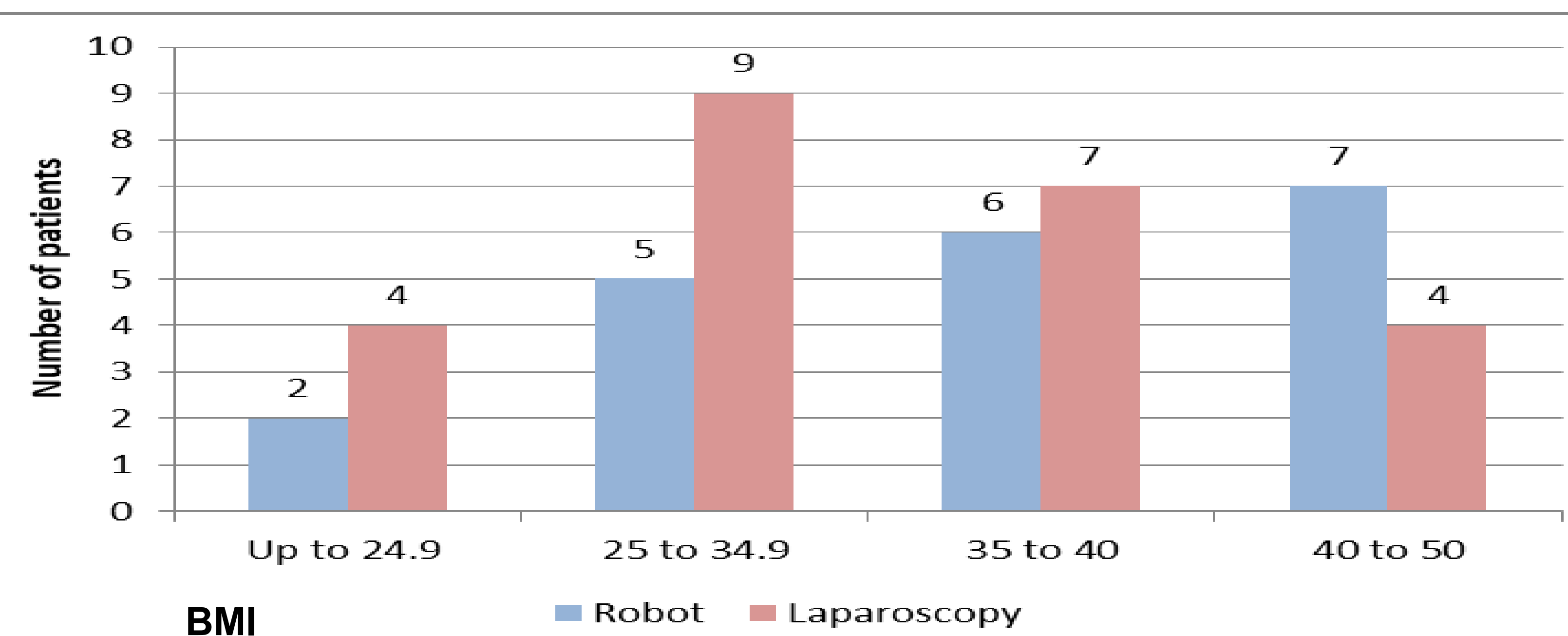
Methods

- We compared the standard of care and postoperative outcomes of robotic cases (Group A) against laparoscopic surgery (Group B) between January and August 2022
- Cases included atypical endometrial hyperplasia, early endometrial cancer, Stage 1A1/1A2 cervical cancer and suspicious complex-looking ovarian masses.
- A total of 44 patients were included (39 surgeries of which included hysterectomy), of which 20 were robotic and 24 were laparoscopic.
- Postoperative data was collected from iportal database, and operation notes and MDT summaries.



Results

- The standard of 100% was met in many aspects including pre-operative biopsy in endometrial patients, preoperative imaging, MDT discussion, recorded performance status, postoperative follow-up appointments and postoperative GP letters.
- The oldest patient in Group A was aged 81 compared with 82 in Group B. The highest BMI in Group A was 58 (148 kg) compared with 48 (128 kg) in Group B. Operative time in Group A was 29.5% between 91 to 180 minutes and 9% of more than 180 minutes (longest duration: 230 minutes) compared with 31.8% and 9% respectively in Group B (longest duration: 212 minutes). In Group A, significant blood loss was 10% (2/20 and highest loss: 850 ml) compared with 12.5% in Group B (3/24 and highest loss: 1000 ml). 50% (10/20) in Group A stayed as inpatients within 24 hours whilst the remaining stayed for at least 2 days (longest duration: 10 days). In Group B, 66.6 % stayed within 24 hours whilst 33.3% stayed for 2 to 4 days.
- Overall, there has been no major postoperative complications affecting both patient groups.
- Approximately 97.7% of postoperative thromboprophylaxis was documented in both groups. One patient in Group B had superficial thrombophlebitis in spite of Dalteparin prophylaxis. Only one patient in Group A was re-admitted to hospital with a pelvic haematoma but was conservatively managed with antibiotics and blood transfusion. There were no reported cases of anaesthetic complications or return to theatre for re-surgery.



Clinical outcome	UHNM Gynae-oncology Robotics (20)	UHNM Laparoscopy (24)
Blood loss	2/20 had > 500 ml Highest 850 ml	3/24 had > 500 ml Highest 1000 ml 2/24 had no documentation
Venous thrombosis	0/20	1/24 had superficial venous thrombosis despite Dalteparin
Length of hospital stay	10/20 up to 1 day 10/20 2 days or more Longest 10 days	16/24 up to 1 day 8/24 2 days or more Longest 4 days
Return to hospital	1/20 due to postoperative pelvic haematoma	0/24
Return to theatre	0/20	0/24
Anaesthetic complications	0/20	0/24

Conclusion

- The use of robotic-assisted surgeries in Gynae-oncology is becoming increasingly popular as it overcomes limitations commonly encountered in laparoscopy.
- These indications favouring robotics include morbid obesity and challenging lymph node dissection in para-aortic and pelvic areas. We highly recommend more robotic surgeons and robot training opportunities in Gynae-oncology to deliver effective patient outcomes and educate trainee surgeons.

References

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