

Operative time and lengths of hospital stay for inguinal hernia repair among open, laparoscopic, and robotic-assisted approaches: a single-center experience

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BACKGROUND

- Inguinal hernia repair is one of the most common surgical procedures in the US, with an estimated 770,000 cases performed annually [1]
- Advantages of MIS approaches: improved post-operative pain, faster recovery time [2]
- Disadvantages of MIS approaches: steep learning curve, increased hospital costs, potentially longer operative time [3,4]
- No consensus on best surgical approach for inguinal hernia repair (IHR)
- **Our study sought to compare the operative time and lengths of hospital stay for each surgical approach in IHR**

METHODS

- Retrospective chart review
- Adults aged 18 years old or older who underwent elective IHR performed by one of six general surgeons at a single academic medical center from January 2019 to December 2021
- Patients undergoing concomitant procedures were excluded
- Abstracted data included sociodemographics, medical comorbidities, operative time, and lengths of hospital stay (LOS)

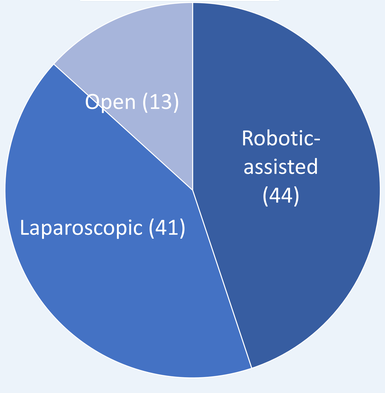
RESULTS

Sociodemographics	N=184
Mean Age	58.8 (SD ± 16.8)
Mean BMI	26.9 (SD ± 4.3)
Mean ASA	2.15 (SD ± 0.68)
Male	89.7%
Recurrent Hernias	20% (n=86)
History of prior abdominal surgery	43% (n=80)
Intraoperative Complications	0%
Postoperative Recurrence Rate	4.3% (n=8)

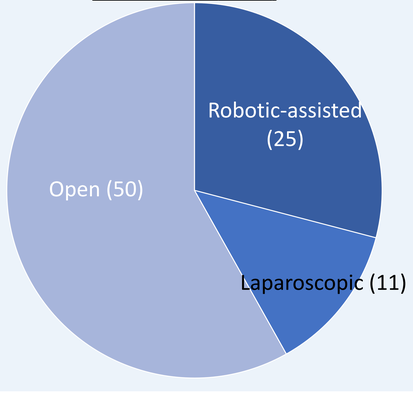
	Unilateral IGR	Bilateral IGR
Operative Time Across Surgical Approach	p = 0.64	**p < 0.05***
LOS Across Surgical Approach	p = 0.83	p = 0.08

* = statistically significant

Proportion of Each Surgical Approach for Unilateral IHR (n=86)



Proportion of Each Surgical Approach for Bilateral IHR (n=98)



CONCLUSIONS

- No significant difference in operative time for unilateral IHR across the three surgical approaches
- Robotic approach has a significantly longer operative time for bilateral IHR compared to open or laparoscopic approaches
  - Potentially due to case selection and complexity of cases
- Surgeons should be able to offer all three approaches for IHR

REFERENCES

1. Rutkow IM (2003) Demographic and socioeconomic aspects of hernia repair in the United States in 2003. Surg Clin N Am 83(5):1045–1051, v–vi
2. Group H (2018) International guidelines for groin hernia management. Hernia 22(1):1–165. https://doi.org/10.1007/s10029-017-1668-x
3. Suguita FY, Essu FF, Oliveira LT, Iuamoto LR, Kato JM, Torsani MB et al (2017) Learning curve takes 65 repetitions of totally extraperitoneal laparoscopy on inguinal hernias for reduction of operating time and complications. Surg Endosc 31(10):3939–3945
4. Tadaki C, Lomelin D, Simorov A, Jones R, Humphreys M, daSilva M et al (2016) Perioperative outcomes and costs of laparoscopic versus open inguinal hernia repair. Hernia 20(3):399–404