A Single-Center Retrospective Review of Laparoscopic Totally Extraperitoneal (L-TEP) vs Robotic Transabdominal Preperitoneal (R-TAPP) Repair of Inguinal Hernia Repair

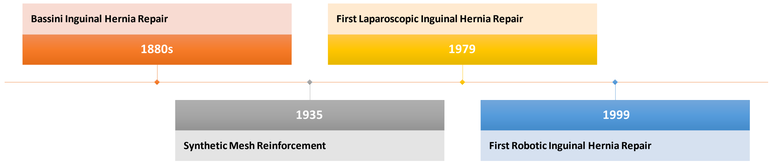
Bryana Baginski MD[1], Daniel Tran BS[1,2],Manoj Ravichandran BS MBA[1,2], Gerald Ogola PhD[1,3], David Arnold MD FACS[1,2]

[1]Baylor University Medical Center (BUMC), Dallas, TX, USA.
[2]Texas A&M School of Medicine, Bryan, TX, USA
[3]Baylor Scott & White Research Institute, Dallas, TX, USA

Introduction

Robotic surgery has demonstrated superiority over laparoscopy in many surgical settings, however, the use of one method over the other is still widely debated in realm of inguinal hernia repair. Prior to the introduction of robotic surgery, laparoscopic inguinal hernia repair grew in popularity but was never fully accepted as the standard approach due to technical difficulty. One such method includes the laparoscopic totally extraperitoneal repair (L-TEP) which has been cited for its conservation of the peritoneal cavity and better outcomes, however, is with greater technical difficulty. With advancements and increased experience in robotic surgery in recent years, robotic transabdominal preperitoneal repair (R-TAPP) has become a commonly used approach for robotic inguinal hernia repair. Although there has been a growing movement towards the robotic approach clinically, there is still limited evidence comparing L-TEP and R-TAPP and their outcomes to justify this transition.

Brief History of Inguinal Hernia Surgery



Methods

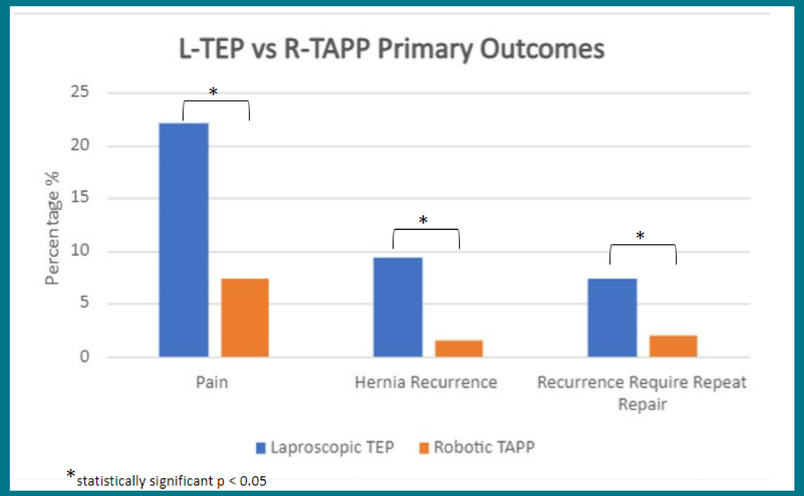
A retrospective review of all patients who underwent L-TEP and R-TAPP at Baylor University Medical Center in between December 2011 and January 2022.

Primary outcomes

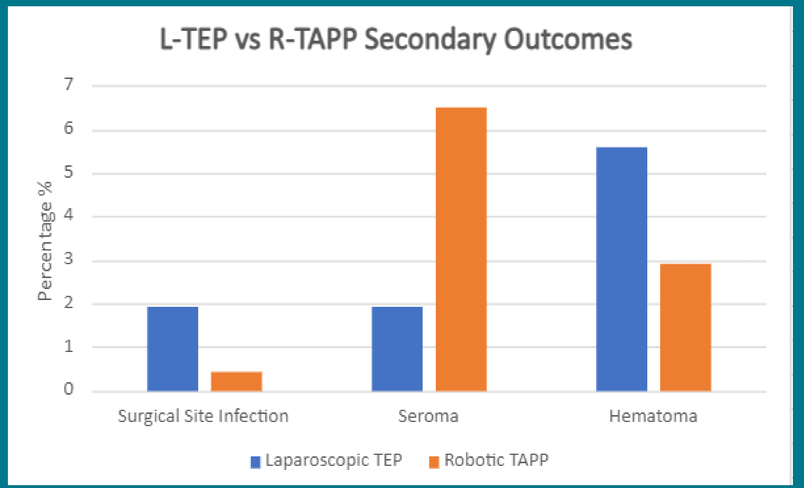
- Postoperative pain
- Hernia recurrence
- Hernia recurrence requiring reoperation

Secondary outcomes

- Surgical site occurrences (infections, seroma, hematoma)
- Hospital length of stay



*statistically significant p < 0.05



Results

- There were no significant differences in patient characteristics and comorbidities between the two groups.
- Hernia recurrence was significantly decreased in those who underwent R-TAPP (1.6%) compared to those who underwent L-TEP (9.3%) (p = 0.01)
- For those who experienced hernia recurrence, the rate of recurrence that required surgical repair was also decreased in those who underwent R-TAPP (2.0%) compared to L-TEP (7.4%) and approaches borderline significance. (p = 0.06)
- Postoperative pain was significantly decreased in the R-TAPP group (7.3%) compared to the L-TEP group (22.2%) (p = 0.01).
- There was no significant difference seen in surgical site infections, seroma, or hematoma; but there was a significant decrease in other complications seen in R-TAPP compared to L-TEP (p=0.01). These were minor complications such as numbness, site itching, mild drainage that resolved by 6 week follow up.
- There was no significant difference in length of stay. (p=0.55) between the two groups.

Conclusions

Our single-center retrospective review demonstrates that R-TAPP has significantly decreased postoperative pain, hernia recurrence, and recurrence requiring reoperation compared to L-TEP.

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Baylor Scott & White
BAYLOR UNIVERSITY MEDICAL CENTER
DALLAS