Baptist Health South Florida

Need for Speed: Does Operative Time Improve with Robotic Single Port Inguinal Hernia Repairs?

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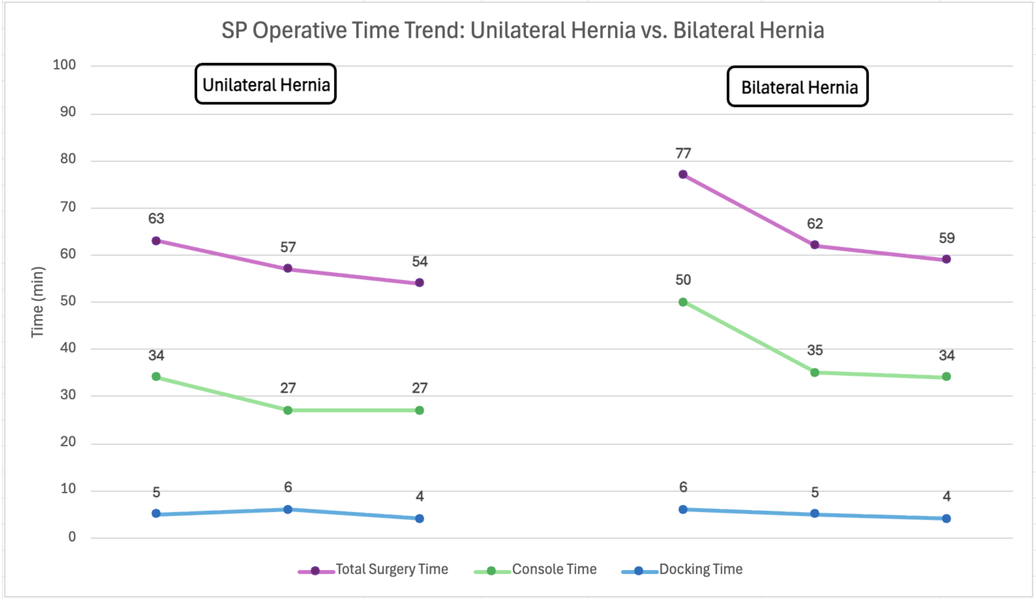
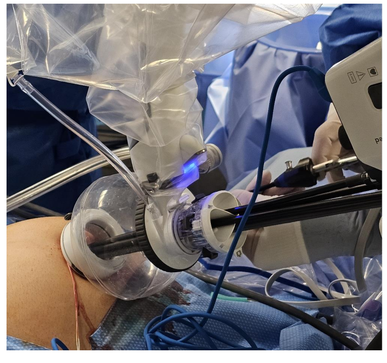
Introduction

- The da Vinci single port (SP) robotic platform has been used extensively in urological and transoral procedures, but the impact of the SP platform on general surgery remains in development
- Previous studies have assessed the safety and feasibility of SP platform on transabdominal pre-peritoneal (TAPP) inguinal hernia repairs and cholecystectomies
- Here, we report our initial experience with the SP system related to TAPP unilateral and bilateral hernia repair, with particular attention to early outcomes in operative efficiency.

Methods

- Conducted a retrospective analysis on 116 consecutive SP robotic inguinal hernia repairs between April 1, 2024 and August 18, 2025.
- Patients (18-78 years old) were chronologically divided into tertiles based on case date of completion and categorized into unilateral, bilateral, with or without concomitant femoral hernia repair.
- Of the 116 cases, 61 included concomitant procedures (ie, umbilical/incisional hernia repairs) and were not evaluated in this study
- Data collected on remaining 55 cases (33 unilateral and 22 bilateral) included total surgery time, docking time, and console time





Results

- 55 cases evaluated: 94% male; 46% White, 40% Hispanic, 4% Asian, 2% Black; Mean age 60 yrs
- Unilateral hernia repairs: console times improved from 34 minutes in the first tertile to 27 minutes in the middle and last tertile
- Total surgery time of bilateral inguinal hernias: mean operative time of 77 minutes in the first tertile, improved to 62 minutes in the middle tertile, and ended with 59 minutes in the final tertile.
- 31% decrease in total surgery time from the first tertile to the third tertile in bilateral hernia repairs. No intraoperative complications/conversions observed.

Conclusion

- Application of the SP robotic platform in inguinal hernia repair demonstrates improvements in total surgery time, docking time, and console time.
- Consistent enhancement of these metrics, together with the SP platform's evidenced safety and efficiency, highlights its adaptability and suggests it has a promising and transformative future
- Subsequent studies should continue to examine the SP platform's operative metrics as well as long-term outcomes in inguinal hernia repair.