The Dreaded 'Callbladder': Should the Robotic Platform Be Made Available For Use At All Times?

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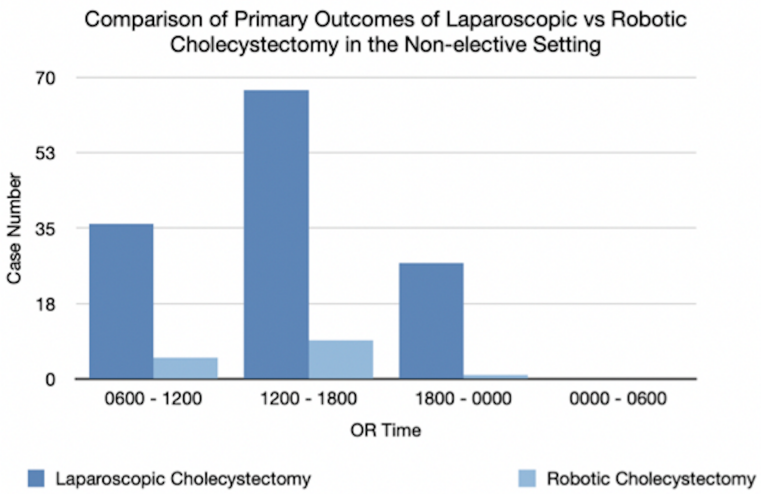
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INTRODUCTION

The utilization of robotic minimally invasive surgery (MIS) by acute care surgeons (ACS) in their practice continues to grow. While laparoscopic cholecystectomy remains the most common MIS procedure, use of the robotic cholecystectomy in the emergency setting is limited. This study aims to evaluate existing barriers to the use of robotic MIS, particularly of robotic cholecystectomy, in the non-elective or acute care setting

METHODS

- In 2022, three acute care surgeons adopted the robotic platform into their elective and non-elective practices at a level 1 trauma center
- A retrospective analysis was then performed for all non-elective cholecystectomy cases in 2022 and 2023



RESULTS

- Cholecystectomy remained the most commonly performed MIS case in non-elective settings (47.7%), 130 performed laparoscopically and 15 performed robotically
- Conversion to open cholecystectomy occurred in 3.8% of laparoscopic cases (5) vs 0% of robotic cases
- Total operating time was similar between laparoscopic (75.6 minutes) and robotic (70 minutes) cases
- Pre-operative and post-operative length of stay was similar between cohorts
- Over 20% of laparoscopic cholecystectomy cases (27) were performed outside of regular operating room hours vs 6.7% of robotic cholecystectomy cases (1) during those same hours

CONCLUSIONS

The use of the robotic platform for cholecystectomy in the acute care setting does not appear to prolong hospital length of stay or operating times and may improve the ability to complete the procedure in a minimally invasive fashion. A lack of availability and access to robotic platforms, specifically out of standard operating room times, is likely the most significant barrier. With the acquisition of a second robotic system and an increase in administrative support, further investigation of the use of the robotic system in a non-elective setting is warranted.

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