The Robot vs. Bariatric Bleeds: New technology helps improve post-operative bleeding complications

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INTRODUCTION

In the tide of robot-assisted minimally invasive surgery, few case reports of robot-assisted bariatric surgery exist in the literature. This study evaluates and compares the perioperative outcomes and risk factors for post-operative bleeding comparing robotic vs. laparoscopic-assisted bariatric surgery.



MATERIALS & METHODS

This study is a single-center retrospective review of all bariatric procedures performed for morbid obesity, both robotic, and laparoscopic approaches, between 2017 and 2020. Patient demographics, preoperative clinical data, surgical pathology, and perioperative outcomes were compared for differences between laparoscopic vs robotic approaches. Chi-square test was used to compare categorical variables. Student's t-test used for continuous variables as appropriate.

RESULTS

Of 786 total patients that underwent robotic-assisted bariatric surgery, 6 of them had a complication related to bleeding in their post-operative course. Four of the index robotic cases required a return to OR for an unanticipated procedure. Of 618 total patients that underwent laparoscopic-assisted bariatric surgery, 31 had a complication related to bleeding in their post-operative course, 13 of which required a return to OR for an unanticipated procedure. There were no significant differences in patient characteristics between the groups. The robotic group had a shorter operative time ($P < 0.01$) and less estimated blood loss ($P = 0.02$).

CONCLUSIONS

Robotic bariatric surgery is a safe procedure and a reasonable alternative to laparoscopy. With meticulous technique, major bleeding can be avoided and most procedures can be completed robotically. Larger studies are needed to elucidate any advantages of a robotic versus laparoscopic approach

References

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