Review of Laparoscopic Surgery in a Resource-limited Setting Through an Alternative Training Approach

MIS AFRICA

SAGES 2025

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Introduction

Laparoscopic surgery is scarce in resource-limited settings, despite its benefits of reduced complications and hospital stays. Traditional training methods like box models, simulators, animal labs, and OR observation are also rarely accessible. This study reviews the first 14 months of laparoscopic cases performed using an alternative training approach at a teaching comprehensive specialized hospital in Addis Ababa, Ethiopia.

Materials and Methods

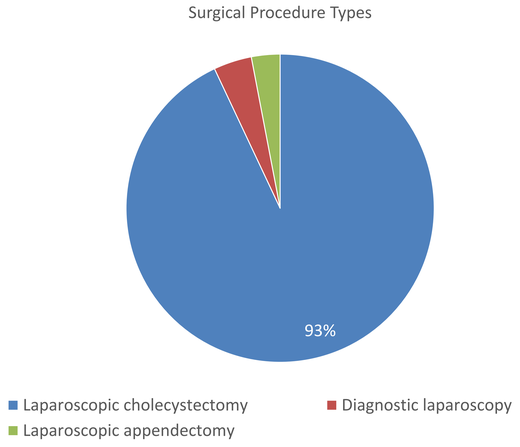
A retrospective cross-sectional study was conducted at teaching Comprehensive Specialized Hospital, Addis Ababa, Ethiopia. Medical records of laparoscopic procedures from April 2022 to June 2023 were reviewed.

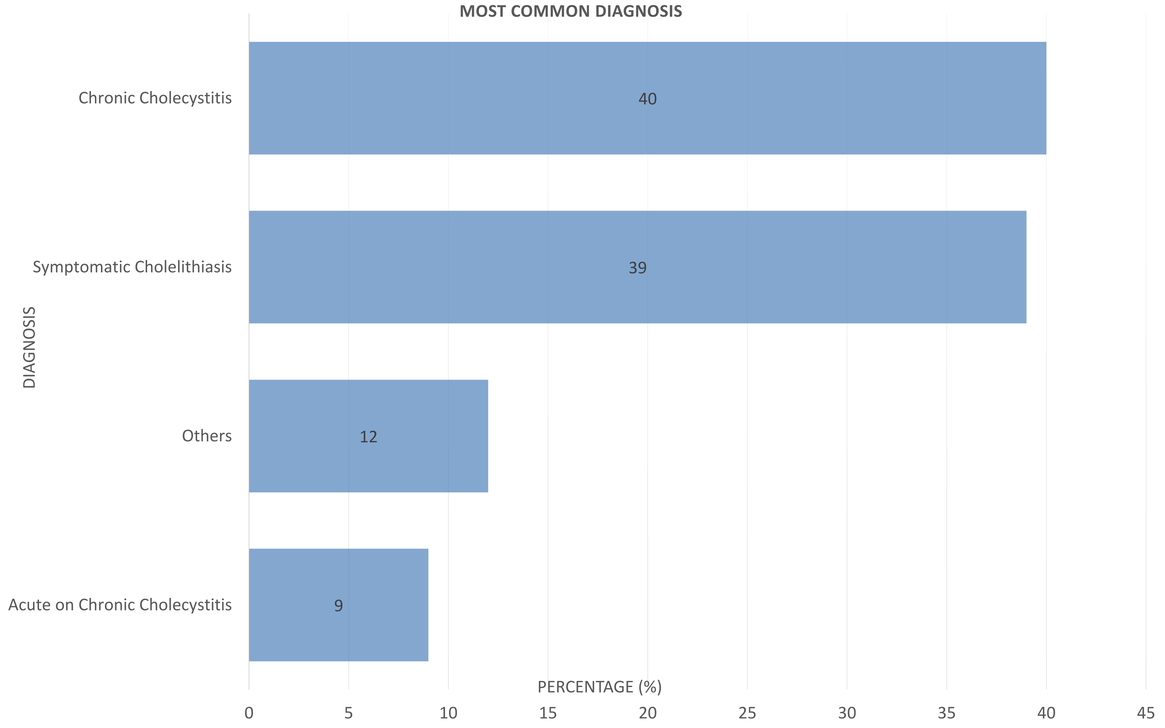


Procedures were performed by a surgeon and residents trained using free structured videos and a low-cost self-made simulation box. Descriptive analysis was done using SPSS version 26.

Results

A total of 115 patients were included in the study. The male to female ratio was 1:38, with a mean age of 47 (SD +15) years. Of the 115 patients, 93% had laparoscopic cholecystectomy done while the rest had diagnostic laparoscopy and laparoscopic appendectomy. The mean duration of the operation and hospital stay were 87 (SD +37.6) minutes and 2.2 (SD +0.72) days, respectively. The conversion rate to open surgery was 0.9%, which was performed for uncontrolled bleeding from the liver bed. The postoperative complication rate was 2/115 (1.7%), which were intraabdominal collection and superficial surgical site infection.





Conclusion

The hospital stay, conversion and complication rates were comparable to most similar studies. Laparoscopic surgery following affordable teaching methods using structured freely available training videos and a low-cost simple laparoscopic simulation box approach can be a good alternative to establish and train laparoscopic surgery at resource limited settings.