FACTORS ASSOCIATED WITH CONVERSION IN LAPAROSCOPIC SURGERY: A SINGLE-CENTER PROSPECTIVE STUDY

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Background

Laparoscopy has a clear patient benefit related to postoperative morbidity but may not be as commonly performed in low-resource countries. The decision to convert to laparotomy can be complex and involve factors related to the surgeon, patient, and procedure. A study of these factors would allow better preparation and preoperative planning to reduce the risk of complications.

Objective: to analyze the factors associated with conversion to laparoscopic surgery in a low-resource setting.

Research Methods

This is a descriptive and analytical prospective study over the period from May 1, 2018 to October 31, 2021.

- Inclusion criteria: patients operated on laparoscopically at a tertiary care institution in West Africa (Sénégal).
- Studied parameters: age, sex, overweight/obesity (BMI ≥ 25), operating difficulty (e.g., accidental opening of the viscera, hemorrhage), problem related to the equipment (e.g., failure of the equipment, rupture of CO2), operating time and conversion rate.
- Statistical analysis: Logistic regression to determine the factors associated with conversion during laparoscopic surgery.

Results

Over the study period, 123 laparoscopic surgeries were performed. The indications were appendicular pathologies (48%), followed by gynecological (18.7%), biliary (14.6%), digestive (10.56%), and parietal (4%).

In 11 cases (8.9%), laparoscopy was converted to laparotomy. Logistic regression found as a factor related to conversion:

- **obesity or overweight (OR=4.6; p=0.034);**
- **an operating difficulty (OR=12.6; p=0.028) and**
- **a problem of equipment (OR=9.4; p=0.002).**

Conclusion

Understanding the factors associated with conversion, shown by this study to include overweight/obesity, operating difficulty, and equipment malfunction, may facilitate better procedural planning to reduce postoperative morbidity in low-resource settings.

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