



EVALUATION OF RELAPAROTOMY IN GENERAL SURGERY PATIENTS IN TERTIARY CENTER - INDICATIONS AND OUTCOME.

General Surgery

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ABSTRACT

Evaluation of relaparotomy in general surgery patients in the tertiary center- indications and outcome **Materials and Methods:** It is a retrospective observational study, Study population: All the patients admitted to the Government General hospital who underwent emergency laparotomy in the department of general surgery Study period: 1 year(2021-2022) Follow-up period: 1 month **Result:** Total of 544 laparotomies were performed out of which 42 patients underwent relaparotomy for various complications out of those 42 most common cause was a burst abdomen, 30 patients were a male median age of the patient was 49 years **Conclusion:** Relaparotomy is a life-saving procedure in many unsuccessful primary laparotomies

KEYWORDS

INTRODUCTION

Complications following emergency laparotomy are common, some patients might need relaparotomy for correction of these complications. Relaparotomy refers to operations performed with in 60 days of initial laparotomy due to complications of the same .It can be classified depending on time ,its goal and nature of urgency (early or late ,radical or palliative planned or un planned

- Some of the important indications of relaparotomy are anastomotic leakage, septic peritonitis, intestinal obstruction, burst abdomen, intestinal perforation and haemorrhage.
- Incidence of relaparotomy can be decreased by proper understanding of predisposing factors and by taking appropriate measures.
- Emergency initial surgery, sepsis and primary suppurative diseases are some of the risk factors for relaparotomy
- Incidence of relaparotomy range from 0.5 -15% in various studies.
- Highest incidence was with gastrointestinal surgeries, while lowest in vascular surgeries.
- Mortality after relaparotomy ranges from 24 to 71%.
- Factors associated with high mortality are elderly patients, peritonitis at the initial surgery and sepsis with multi organ failure.
- Majority of patients who underwent relaparotomy are admitted in Intensive care unit.

This retrospective study aimed to study incidence of relaparotomy in department of general surgery in siddhartha Medical College, AP during january 2021 to january2022.

AIM

The aim of the study is

To study the indications of relaparotomy and

To evaluate mortality and morbidity following relaparotomy in emergency laparotomies

Inclusion Criteria

All the patients of any age group who underwent relaparotomy within 60 days of the initial laparotomy were included

Exclusion Criteria

The patient giving negative consent were excluded from the study

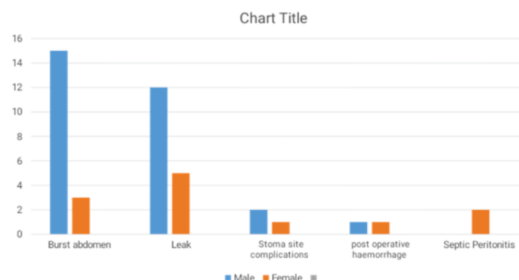
METHODOLOGY

- Study Population- Patients admitted in Government general Hospital vijayawada who underwent Emergency laparotomy in department of general surgery .
- Study Design- Retrospective Observational Study
- Study Period-1 year (2021-2022)
- Follow up period- 1 month
- Total 42 relaparotomies were conducted in general surgical operation theatre.

- Evaluation of various causes of relaparotomy, factors responsible for relaparotomy and outcome of relaparotomy in terms of morbidity and mortality
- Prior written and informed consent to participate in the study was taken with thorough explanation of the method and treatment.
- All patients were observed for their preoperative assessment, findings in initial laparotomy, Procedure of relaparotomy with intraoperative findings and post-operative outcomes including morbidity and mortality.
- Data were recorded in pre-validated form.
- Complications were determined based on clinical analysis, hematological and radiological examinations.
- Relaparotomies was conducted most frequently in patients with
 - ✓ existing hemorrhage resistance to medical management,
 - ✓ progressive peritonitis or fecoperitoneum,
 - ✓ abscess formation impossible to drain percutaneously.
 - ✓ existing ileus resistant to medical management.
 - ✓ worsening of patient general condition

RESULTS

- Total 544 laparotomy were performed out of which 42(7.72%) patients underwent relaparotomies for various complications.
- Average interval between onset of symptom to initial emergency laparotomy was 2.79 days (range: 1-27 days).
- All 42 patients underwent emergency re laparotomy.
- No planned relaparotomies were conducted
- Out of 42 patients 30 (71.4%) were male and 12(28.5%) were female.
- Median age of the patient was 49 years (range-21 years to 73 years).
- Incidence of relaparotomy was highest among 51-60 years age group (11.2%) followed by 41-50 years (9.8%), 61-70 years (9.3%) and lowest in >70 years (5%) (Table 1)
- The most common indication for initial laparotomy were hollow viscus perforation, intestinal obstruction, stab and blunt abdominal injuries, appendectomy and other conditions such as septic peritonitis.



- The highest 20 (47.61%) relaparotomy were conducted after 5-10 days of initial laparotomy.
- On preoperative assessment, 17 (40.48%) patients were anaemic.
- 31(73.81%) patients had hypoalbuminemia,
- 23(54.71%) had leukocytosis and 6(14.28%) had leukopenia.
- 7(16.66%) patients had poor respiratory system.
- 8 patients were chronic smoker whereas 5 patients were alcoholic and 12 patients were both chronic smoker and alcoholic.
- 13 patients had associated co morbidity in which 1 had coronary artery disease, 8 patients had diabetes mellitus, 3 had systemic hypertension 1 had abdominal tuberculosis.
- In post-operative period, 33 (78.56%) patients were shifted to ICU following relaparotomy for close monitoring.
- Mean duration of ICU admission were 4.16 ± 2.25 days.
- Out of 42 relaparotomies 9(27.26%) case died as a consequence of relaparotomy.
- Maximum mortality was noted in relaparotomy for leak from anastomotic and perforation site 5(55.55%) followed by perforation 2(22.22%) and 1 (11.11%) each due to burst abdomen and stomal complication.



- 6(14.28%) deaths were reported in 51-60 years age group followed by 2 (4.76%) deaths in 41-50 year age group 1(2.38%) in 61 - 70 age group
- Highest deaths of 4 patients (%) were noted within 2-4 days of relaparotomy followed by 2(9.52%) within 4-6 days, 1(2.38%) within 2 days, 1 (2.38%) within 6-8 days and 1 (2.38%) after more than 10 days of relaparotomy.

DISCUSSION

- In this study, evaluation of 42 patients who underwent relaparotomy in Government general hospital, vijayawada was done.
- Measures which were carried out to reduce the incidence of relaparotomy are
 - ✓ proper preoperative workup,
 - ✓ perioperative antibiotics and proper antiseptics,
 - ✓ proper surgical techniques,
 - ✓ secured haemostasis,
 - ✓ complete exploration and appropriate drainage,
 - ✓ better postoperative fluid and electrolyte balance.

The incidence of relaparotomy depends upon the disease process and the type of surgery performed

- Early diagnosis and immediate surgery to rectify the cause might decrease the mortality.
- Despite the advances in imaging, surgical technique and critical care, relaparotomy still carries high mortality rate.
- Despite with best possible post-operative care in our study, mortality rate in case of relaparotomy was high as 27.26%, which is similar to other studies in which mortality rate was in between 26.7% to 37.3%.2,3,6,7.

CONCLUSION

- Relaparotomy is life-saving procedure in many unsuccessful primary laparotomy.
- Burst abdomen is the most common indication of relaparotomy followed by leak from anastomotic/perforation site.
- The older, anemic and patient with hypoalbuminemia in pre and postoperative period and dirty wound in 1st laparotomy have higher risk to undergo relaparotomy.
- Earlier recognition and treatment of post-operative complications, consideration of relaparotomy with vigorous ICU monitoring and post-operative care leads to decrease post-operative mortality.
- Despite the recent advances in the preoperative management and postoperative care, the mortality following relaparotomy ranges around 20-25%.

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