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TO DETERMINE THE POSTOPERATIVE COMPLICATIONS OF EMERGENCY LAPAROTOMIES

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Abstract:

Objective: *To evaluate the postoperative complications of emergency laparotomy.*

Study Design*: A comparative cross-sectional study.*

Place and Duration: *In the Department of Surgery, Gangaram Hospital Lahore for one year duration from July 2017 to July 2018.*

Methods: *Three hundred and twenty patients undergoing laparotomy were included. They were followed meticulously and postoperative complication / sequel was recorded.*

Results: *Postoperative complications were observed in 287 patients (89.7%) of 320 patients. The postoperative fever was in 73 (22.8%), in 71 subjects wound infection (22.2%), and 45 patients with vomiting (14%), wound deformations 17 (5.3%), anastomosis rupture or pneumonia in 10. 3.1%. Septicemia was observed in 18 (5.6%) and 24 (7.5%)was the mortality rate.*

Conclusion: *Postoperative complications are more common in emergency laparotomies. Postoperative fever, wound infection, nausea and vomiting are the most common complications.*

Key words: *Laparotomy, emergencies, postoperative complications.*

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INTRODUCTION:

Laparotomy is a surgical procedure performed more frequently by a routine surgical team. On a daily basis, at least one or two or even more laparotomies are performed at the Surgical Department of Gangaram Hospital Lahore. The results are highly debated and can be seen almost every day. The negative result in any respect is considered to be a postoperative complication on the part of the surgeon or a patient. There are many indications for laparotomy which may be chronic for emergency laparotomy and which may be chronic for elective laparotomies. But his role is still the same as saving lives. The word laparotomy in surgical language explains the opening of the abdomen and continues according to the determined cause. There is no surgical procedure without complications in this world. Minor or major complications are important in terms of mortality and morbidity. A healthy result is needed on both sides, but it is a complication even in a simple procedure. Many things can cause complications, but most importantly, the patient's condition, technique and surgical experience, pre- and post-operative care are the determining factors. These complications range from a simple infection of the wound or unusual pain at the site to extreme points such as death or permanent disability. The only aim of minimizing the risk of complications is to provide optimal optimization and to verify the medical care process for the patient. Although the principles of surgery remain the same. In our study, postoperative complications were seen in emergency laparotomies. In order to reduce the morbidity and mortality associated with laparotomy, an opportunity is provided for early diagnosis and rapid management of postoperative complications.

MATERIALS AND METHODS:

This descriptive study was held in the Department of Surgery Unit II of Gangaram Hospital Lahore for one year duration from July 2017 to July 2018. Three hundred twenty consecutive patients who underwent laparotomy regardless of age and gender were included in the study after written consent and informed in writing about the patient's condition and possible consequences. Cases with laparotomy, cholecystectomy and hysterectomy secondary to appendectomy were excluded. All cases were initially visited in the OPD / emergency situation and then sent for surgical consultation. A detailed history and clinical examination were performed. Data was recorded in a pre-designed format. Reference analysis were performed as complete blood count, urine analysis, serum urea / creatinine, serum electrolytes, CXR, electrocardiography, hepatitis B and C profile, blood groups and blood sugar (randomized). Abdominal radiographs and abdominal ultrasound were also performed. A pre-anesthetic evaluation was performed after an initial conservative treatment including resuscitation with IV fluid by Ringer's lactate solution / catheterization with folley / nasogastric intubation. Under general anesthesia, the operating area was prepared with povidone iodine, and all patients were opened with a 20 mm knife through the midline abdominal incision, and the surgical procedure was performed according to the need for the underlying disease. After treating the primary pathology, complete peritoneal lavage was performed with 12 liters of normal saline. Using the Nelton catheter, two drains were placed in the peritoneal cavity and removed from separate puncture incisions. The wounds were closed accordingly. Patients were treated intravenously with injectable antibiotics. Postoperative complications were recorded. Persistent postoperative fever (> 48 hours), postoperative nausea and vomiting (PONV) etc. Watched regularly. Wound examination began on the second postoperative day. In the intestinal examination (enterocutaneous fistula), redness, edema, serosanguenous secretion and the clinical manifestations of the presence of pus were recorded. Stomal orifices (colostomy / ileostomy) were checked from the first postoperative day and checked regularly. The abdomen was also examined to detect any leakage early in the intestinal repair area. Mortality was recorded in 30 days. Late complications such as incisional hernia formation and postoperative bowel obstruction were recorded 3-6 months after surgery. Data were analyzed with the help of SPSS-18. Descriptive statistics of the patients were analyzed. The frequency of different operations and postoperative complications were recorded.

RESULTS:

A total of 320 patients were included in this study. Of the 170 (53.13%) were male and 150 (46.88%) were female. The age ranged from 12 to 80 years (35.6 ± 16.4 years). Acute Abdomen / Acute Peritonitis was found in 198 (61.9%) of the cases, 84 (26.25%) of the patients had acute intestinal obstruction and 38 (11.85%) of them were Abdominal Injury. Acute appendicitis was the main cause of acute abdomen and 51 perforated appendix (23.7%), ectopic pregnancy 35 (17.6%) and perforated duodenal ulcer 34 (17.1%). Bowel tuberculosis is the main cause of acute intestinal obstruction (50%) followed by volvulus 21 (25%) and band / adhesions 15 (17.86%). Then, one of them developed incisional hernia, and incisional hernia was seen in intestinal tuberculosis (Table 1).

Table 1: Emergency laparotomies n=320

Diagnosis	n (%)
Acute abdomen/ acute peritonitis	**198(61.9%)**
Acute Perforated Appendicitis	51(25.8)
Ruptured Ectopic Pregnancy	35(17.6)
Perforated Duodenal Ulcer	34(17.1)
Torsion/ Ruptured Ovarian Cyst	29(14.6)
Mesenteric Vascular Occlusion	9(4.5)
Primary Peritonitis	11(5.6)
Enteric Perforation	14(7)
Uterine Rupture with intra-uterine death	7(3.5)
Others	8(4)
Acute intestinal obstruction	**84(26.25%)**
Bands/ Adhesions	15(17.9)
Carcinoma Colon/ Metastatic Abdominal Tumour	5(6)
Intestinal Tuberculosis	42(50)
Volvulus (Sigmoid/ Caecal)	21(25)
Internal Hernia	1(1.1)
Abdominal trauma	**38 (11.85%)**
Traumatic Ileal/ Jejunal Perforation	9(23.7)
Gun Shot Wound Abdomen	19(50)
Traumatic Sigmoid Perforation	7(18.4)
Splenic Rupture	1 (2.6)
ParanephricHaematoma	1 (2.6)
Pelvic Haematoma (Polytrauma/ Head Injury)	1 (2.6)

Percentages and number of complications in emergency laparotomies can be seen in table 2.

Table 2: Complications in Emergency Laparotomies (n=320)

Complications	n=	%age
Postoperative Fever	73	22.8
Wound Infection	71	22.2
Postoperative nausea and Vomiting	45	14.0
Mortality	24	7.5
Septicemia	18	5.6
Wound dehiscence	17	5.3
Pneumonia	10	3.1
Incisional Hernia	9	2.8
Anastomotic Dehiscence	8	2.5
Peristomal Excoriation	5	1.6
Duodenal Fistula	4	1.25
Adhesive Intestinal Obstruction	3	0.9
Total patients with complications	287	89.7

DISCUSSION:

Emergency laparotomy for acute abdomen is an important test of the surgeon's surgical skills. Postoperative care is as important as preoperative preparation for a successful outcome. The main purpose of rigorous postoperative care is the early detection and immediate treatment of postoperative complications. In our study, 320 emergency

laparotomies were performed and postoperative complications were found in 287 (89.7%) patients. The most common postoperative complication after surgery was determined in 73 (22.8%) cases and the same result is in favor of my study 21.6% found a study postoperative fever as the most common complication found in another study conducted by Jawad et al. reported postoperative fever as a complication. In the postoperative nausea and vomiting 45 (14%), this study was found to be a common complication of nausea and vomiting in postoperative Murtaza et al. They also supported this result in a new study on laparotomy. Postoperative wound infections make an important contribution to the postoperative morbidity of patients. In our study, 21.5% of patients with this value after surgery can be compared with study of wound infection. 71 (22.2%) patients were detected with wound infection documented the same. Worsening of the abdomen wound is a very serious postoperative complication associated with high morbidity and mortality. It has a significant impact on the costs of medical care for both the patient and the hospital. National results of Waqaret studies al and Buhler et al. Afzal S et al found that the percentage of the wound was 8,13% and in an international study, the wound was found to be 0.43%. In our study, in emergency laparotomy, wound perforation was 17 (5.3%). A high percentage of abdominal pain in the emergency laparotomy is due to many factors such as poor hygiene and patient comorbidity, high-level set-ups or emergency-related installations and, of course, pathology. The underlying disease was found to be operative. Incisional hernia after laparoscopy is a frequent and often weakening complication. Despite significant advances in many surgeries, correction of incisional hernias remains problematic with 5% recurrence rates. Recurrence rates are probably underestimated due to the lack of long-term follow-up and objective criteria to determine true relapse in the literature. More than 2 million laparotomies are performed annually in the United States, with an incidence of 2 to 11% inisional hernias reported. In this study, 9 (2.8%) patients had an incisional hernia similar to the results of Murtaza et al. In 3.6% of the patients, an incisional hernia and laparotomies accounted for 2.77% of different studies.

CONCLUSION:

Postoperative fever, wound infection and postoperative complications such as inguinal hernia are the most common after laparotomies. The most common problems are postoperative fever, wound infection and postoperative nausea and vomiting. Apart from wound infections, the local complications of the wound are wound opening and incisional hernia which directly affect the outcome of the disease.

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