

**SURGICAL SITE INFECTIONS IN EMERGENCY ABDOMINAL SURGERIES****DR. P. R. BYAS ¹ AND DR. SHYAM KUMAR DHAKAITA ²***1. Professor, Dept. of General surgery, R.D. Gardi Medical college, Ujjain, India.**2. Associate Professor, Dept. of General surgery, R.D. Gardi Medical college, Ujjain, India.***ABSTRACT**

Abdominal surgeries are one of the most common surgeries performed as an emergency procedure. After these surgeries in the postoperative period, the surgical site infection is one of the common complications leading to superficial wound disruption or burst abdomen resulting in increased postoperative hospital stay. Later it may also results in incisional hernia formation. Here in this study our aim was to find out the infection rates in emergency abdominal surgeries. Methods- All the 395 patients admitted and operated for acute abdominal conditions in R. D. Gardi medical college as an emergency procedure from March 2009 to September 2012 were included in this study. All the patient characteristics were noted and studied .Use of prophylactic antibiotics, type of operation, intra operative findings, operative time all were recorded. In the post operative period, the wound was inspected regularly for signs of infection, later; the hospital stay was also recorded. Results – The mean age of the patients operated in emergency was 46 years. Male patients were 280 and females were 115 in number [Male: Female ratio-2.4] Out of 395 patients 74[18.73%] showed the signs of postoperative surgical site infection. The operative procedure in which the rate of infection was highest was emergency exploratory laparotomy for ileal perforation [44.44%], followed by laparotomy for gastric perforation[32%]. The average duration of operation was 2 hours and 10 minutes. The postoperative stay was ranging from 9 to 32 days. Discussion –The incidence of surgical site infection in the emergency abdominal surgeries done in our institute was more as compared to that given in the literature.

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INTRODUCTION

Abdominal surgeries are one of the most commonly performed procedures in emergency conditions. Common amongst these are exploratory laparotomy for perforation peritonitis [gastric or ileal], appendectomy, laparotomy for intestinal obstruction or strangulated inguinal hernias. These surgeries are full of complications. The surgical site infection is one of the common complication of these surgeries (1,2). The surgical site infection can be defined as the signs of inflammation in the wound along with pus discharge within 30 days of operation (3). The surgical site infection rates are different according to the type of operation. According to literature they may be 1 to 2% for clean abdominal surgeries but may be increased up to 40% for the surgeries like for perforation of bowel (4). So we started our study of surgical site infection in emergency abdominal surgeries in the patients. Our aim was to find out the actual percentage of infection in various emergency abdominal surgeries in our institute.

MATERIALS AND METHODS

All the patients admitted and operated in emergency at R. D. Gardi medical college hospital were included in the study. Total 395 patients were included in this study. Age, sex and type of abdominal emergency were recorded. Administration of prophylactic

antibiotic was also recorded. In the intraoperative period, the intraoperative findings were noted. Time taken for each procedure was noted. In the postoperative period each and every wound was inspected for signs of infection during the subsequent dressing's. Pus and intraabdominal collections in the drains were sent for culture to know about the infection. After the discharge, the hospital stay was recorded and patients were followed up to 60th postoperative day (2 months).

RESULTS

Out of 395 patients, 74 [18.73%] showed the signs of surgical site infection. The mean age of the patients was 46 years. Total 280[70.88%] males and 115[29.11%] females were included in this study. The Male: Female ratio was 2.4. The cases operated for ileal perforation recorded highest number of infection [44.44%], followed by laparotomy for gastric perforation [32%]. Operation for strangulated inguinal hernias had 20% of infection. Cases of laparotomy for intestinal obstruction recorded 15% of infection and appendectomy recorded 12% post operative surgical site infection [Table 2]. The mean duration of operative procedure was 2 hours and 10 minutes. The hospital stay of patients was ranging from 9 to 32 days.

TABLE 1
SEX DISTRIBUTION OF PATIENTS (n=395)

SEX	NUMBER	PERCENTAGE
MALE	280	70.88
FEMALE	115	29.12

TABLE 2
Surgical site infection in different emergency abdominal surgeries.

Operation	Number of cases	Percentage	Number of cases with infection.	Percentage
Laparotomy for ileal perforation.	45	11.39%	20	44.44%
Laparotomy for gastric perforation	55	13.92%	18	32%
Operation for strangulated inguinal hernias	10	2.53%	2	20%
Laparotomy for acute intestinal obstruction.	60	15.18%	9	15%
Appendectomy	200	50.63%	24	12%
Laparotomy for abdominal trauma.	15	3.79%	1	6.66%
Splenectomy.	10	2.53%	0	0

DISCUSSION

Over all infection rate in our study was 18.73%, which was more than given in the literature [about 14-15%] (5,6). This might be due to poor hygiene and dirty living condition of our patients mostly coming from low socio-economic strata as well as rural centre in which we were working. In case of dirty wounds occurring in the procedures like laparotomy for perforation, the rate of surgical site infection was more as compared to standard value given in the literature. Also in case of comparison between the infection rates in clean contaminated surgeries (Appendectomy and surgery for abdominal trauma), similar results were found. It was realised that the rate of infection in the emergency abdominal surgeries depends upon the type of pathology. Also, there are some other factors involved i.e. associated diseases like diabetes,

tuberculosis, immunocompromised states, administration of prophylactic antibiotic, duration of operation etc, but the major factor remains the type of operation, as the infection in the cases of emergency abdominal surgeries comes from intra abdominal area to outside (1,7). Therefore in cases of perforation peritonitis, it is more as compared to other causes like intestinal obstruction and appendectomies.

CONCLUSION

It is therefore concluded that the surgical site infection rates mainly depend upon the type of abdominal pathology and operation. However we can minimize the rates by modifying the associated factors.

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