

Examine the Prevalence of Post-Operated Complication in Patients Undergone Surgical Treatment for Colorectal Carcinoma with Open Method and Laparoscopic Technique

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ABSTRACT

Aim: To analyze the frequency of complications after surgical treatment for colorectal carcinoma with two different surgical techniques of laparoscopic and open surgical methods.

Study design: Cross-sectional Study.

Place & duration of study: Department of Surgery, Shahida Islam Medical Complex Lodhran 1st November 2016 to 31st December 2018.

Methods: One hundred and seventy patients of both genders had ages >20 years whom had undergone surgical treatment for colorectal carcinoma were included. Patient's detailed medical history including age sex was examined after taking written consent. Two different surgical techniques open and laparoscopic were applied. Early post-operative complications were examined. Patients with other malignant carcinoma were excluded.

Results: Ninety five (55.88%) patients were men while rests were women. 69 (40.59%) patients were ages 21 to 35 years, 71(41.76%) patients had ages 36 to 59 years and 30(17.65%) patients were ages >59 years. After surgery 32(18.82%) patients had wound infection and abdominal abscess found in 21(12.35%) patients. We found that surgical site infection and abdominal was significantly associated to surgical technique p-value 0.029 and 0.027.

Conclusion: It is concluded that the prevalence of post-operative complications were mostly found in patients whom were treated with open surgical technique.

Keywords: Prevalence, Complication, Colorectal carcinoma

INTRODUCTION

Colorectal carcinoma is the most frequently diagnosed malignant disease found worldwide in men and women. In all over the world 12 lacs people were affected to CRC (colorectal carcinoma) and 0.687 million deaths were estimated in 2008.¹ Ratio of this malignant disease (cancer) is significantly higher in men than in women. Worldwide, Country-wise cases and mortality ratio are present in the WHO, GLOBOCAN database. Western studies showed that the CRC new cases and mortality rate are slow and steadily going to the decreasing in United States².

Approximately 0.142 million new incidence of Large Bowel cancer are diagnosed annually, in which 0.102 million are colorectal and rest are rectal carcinoma³. Moreover, Some studies showed that some risk factors are mostly associated to Colon comparative to rectal carcinoma/cancer⁴. Many factors involved in developing malignant carcinoma, especially environment and genetic problems can increase the incidence of colorectal carcinoma⁵.

Commonly the surgical methods used for treatment of CRC are Open and laparoscopic surgery. However, outcomes of both surgical techniques either short or long term are still in under observation. Many studies have been done to evaluate the outcomes of using both techniques. POC (post-operative complications) causes death in

patients who had treated surgery for CRC and its prevalence fluctuated rely on operative method, surgical instruments, surgeon experience and patient condition.

This comparative study was conducted to evaluate the prevalence of early POC in patients whom had treated colorectal carcinoma surgery, so that it will be helpful for patients and surgeons for management of these malignant diseases.

MATERIALS AND METHODS

This cross-sectional/observational study was conducted at Department of Surgery, Shahida Islam Medical Complex Lodhran 1st November 2016 to 31st December 2018. Our Ethical Committee approved this research. One hundred and seventy patients of both genders had ages >20 years whom had undergone surgical treatment for colorectal carcinoma were included. Patient's detailed medical history including age sex was examined after taking written consent. Two different surgical techniques were applied. Early post-operative complications were examined. Patients with other malignant carcinoma were excluded. Statistical data was analyzed by SPSS 19. P-value <0.05 was considered as significant.

RESULTS

There were 95 (55.88%) male patients while rests 44.12% patients were females. Sixty nine (40.59%) patients were ages 21 to 35 years, 71(41.76%) patients had ages 36 to 59 years and 30(17.65%) patients were ages >59 years

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(Table 1). Ninety eight (57.65%) patients were treated with laparoscopic technique and 42.35% were treated with open surgical method. After surgery 32(18.82%) patients had wound infection and out of 32(100%) wound infected patients 22(68.75%) patients were treated with open surgical technique and 10(31.25%) patients with laparoscopic method. Abdominal abscess found in 21(12.35%) patients and out of 21(100%) patients 14(66.67%) patients were treated with Open method while 33.33% were treated with laparoscopic method. We found that surgical site infection and abdominal abscess was significantly associated to surgical technique p-value 0.029 and 0.027 (Tables 2-3).

Table 1: Characteristics of all the patients

Variable	No.	%
Gender		
Men	95	55.88
Women	75	44.12
Age (years)		
21 - 35	69	40.59
36 – 59	71	41.76
> 60	30	17.65
Surgical Method		
Laparoscopic	98	57.65
Open	72	42.35

Table 2: Prevalence of early post-operative complications

Complication	No.	%
Wound Infection		
Yes	32	18.82
No	138	81.18
Abdominal Abscess		
Yes	21	12.35
No	149	87.65

Table 3: Cross observation of complications with surgical technique

Complication	Open	Laparoscopic	P-value
Surgical site infection	22 (68.75%)	10 (31.25%)	0.029
Abdominal abscess	14 (66.67%)	7 (33.33%)	0.027

DISCUSSION

Many studies emphasized on the benefits stating the significant advantages of the laparoscopic approach compared with the open surgery of reduced blood loss, early return of intestinal motility, lower overall morbidity, and shorter duration of hospital stay, leading to a general agreement on laparoscopic surgery as an alternative to conventional open surgery for colon cancer. In our study, we found that mostly patients were males 55.88% and females were 44.12%. These results show similarity to some other studies in which male gender had high prevalence of colon cancer⁶⁻⁹.

We also observed in this study that most of the patients were of 4th and 5th decade of his life. These results were similar to some other studies conducted regarding colorectal carcinoma in which most of the patients were ages 30 to 60 years^{10,11}.

In this study, we found overall early post-operative complications was 31.17% and in which 18.82% were wound infection and 12.35% were abdominal abscess. Our

study shows similarity to some other studies in which early post-operative complications was rated from 18 to 35%.¹²⁻¹⁴ We found that most of the complications were found in patients whom were treated with open surgical method as compared to those whom were treated with laparoscopic technique. These findings were similar to multiple other studies in which rate of early post-operative complications was high in open surgical method as compared to laparoscopic.¹⁵⁻¹⁹ In our study, we found that surgical site infection and abdominal abscess was significantly associated to surgical technique p-value 0.029 and 0.027²⁰.

CONCLUSION

Colorectal carcinoma is the most frequent malignant disorder found in middle ages of both genders. In our study, we concluded that the prevalence of early post-operative complications was high and most of the complications were followed to open surgical method as compared to laparoscopic technique. It is also concluded that Laparoscopic technique is much safer than the open surgical method.

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