FAST TRACK PROTOCOL FOR EARLY INTRAABDOMINAL DRAIN REMOVAL AFTER COLORECTAL CANCER SURGERY WAS NOT ASSOCIATED WITH SURGICAL SITE INFECTION AND READMISSION RATE

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ABSTRACT Background: Nowadays, surgical resection was still the option for resectable colorectal cancer patients, curative resection associated with better clinical outcome and survival rate. Surgical site infection was one of the most common problems during this procedure, and fast tract protocols were announced for several years to enhanced recovery after surgery. In many centres, for some other reasons, intraabdominal drain placement was still needed, according to ERAS protocols, early drain removal was recommended for those cases.

Methods: We would evaluate the resectable colorectal cancer cases with advanced stage (stage III and IV) whose already been done resection for the tumour. Thirty days follow up was done to evaluate the presence of surgical site infection after surgery; the readmission rate associated with postoperative infection would be recorded. Unresectable colorectal cancer cases were excluded.

Results: 14 cases of colorectal cancer patients were evaluated in this study. One patient was < 40 years old; the rest of the patients was > 50 years old. The most common cause was rectal cancer (8 patients, 57%), left-sided colon cancer was found in 3 cases. Early drain removal (the 3rd postoperative days) was done for those cases. We found superficial surgical site infection on 1 case but was not associated with further readmission and was not associated with other intraabdominal complication. Those surgical site infection could be managed conservatively and was suggested with elderly and emergency operation.

Conclusion: Fast track protocols for early intraabdominal drain removal was safe and not associated with increased risk of surgical site infection and readmission rate.

KEYWORDS fast track protocols, early drain removal, colorectal cancer, surgical site infection

DOI:10.5455/IJMRCR.FastProtocol-Early-Intraabdominal-Drain-Removal-Colorectal-Cancer-Surgery
First Received: May 04, 2020
Accepted: May 15, 2020
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Introduction

The Enhanced Recovery After Surgery (ERAS) Society care pathways includes evidence-based items designed to reduce perioperative stress, maintain postoperative physiological function and accelerate recovery after surgery. Using such a multimodal stress-minimising approach has been shown repeatedly to reduce rates of morbidity, improve recovery and shorten the length of stay (LOS) after major colorectal surgery.[1,2]

Nowadays, surgical resection was still the option for resectable colorectal cancer patients, curative resection associated with better clinical outcome and survival rate. Surgical site infection was one of the most common problems during this procedure, and fast tract protocols were announced for several years to enhanced recovery after surgery. In many centres, for some other reasons, intraabdominal drain placement was still needed, according to ERAS protocols, early drain removal was recommended for those cases.[2,3,4]

Enhanced recovery after surgery (ERAS), also referred to as an enhanced recovery program, fast-track rehabilitation, multimodal management, or similar descriptors, is a multidisciplinary approach to perioperative care. A protocol of components related to preadmission, preoperative, intraoperative, and postoperative care is implemented with the goal of improving patient recovery, facilitating earlier discharge from the hospital, and potentially reducing health care costs without increasing complications or hospital readmissions. The protocol components may contribute to minimizing, and/or improving the response to, physiological stress associated with surgery.[2,5]

Methods

We would evaluate the resectable colorectal cancer cases with advanced stage (stage III and IV) whose already been done resection for the tumour from January until December 2019. Thirty days follow up was done to evaluate the presence of surgical site infection after surgery; the readmission rate associated with postoperative infection would be recorded. Unresectable colorectal cancer cases were excluded.

Results

Fourteen cases of colorectal cancer patients were evaluated in this study. One patient was < 40 years old; the rest of the patients was > 50 years old. The most common cause was rectal cancer (8 patients, 57%), left-sided colon cancer was found in 3 cases. Early drain removal (the 3rd postoperative days) was done for those cases. We found superficial surgical site infection on 1 case but was not associated with further readmission and was not associated with other intraabdominal complication. Those surgical site infection could be managed conservatively and was suggested with elderly and emergency operation.

Discussion

Fast-track protocols have been used to optimize the perioperative care and to enhance postoperative recovery. This study examined short-term clinical outcomes and determinants affecting the length of postoperative hospital stay.[6,7]

Postoperative functional recovery was fast, morbidity and readmission rates were low and postoperative hospital stay short, indicating that fast-track care should form the mainstay of elective colorectal surgery.[8]

There were many studies like meta-analysis, and systematic review shows the effectiveness of the fast track protocols. The present systematic review suggests that fast track protocols in colorectal and pancreas surgery are associated with cost savings compared to conventional perioperative management. Cost data in liver surgery are scarce.[9]

Cost-effectiveness study has been published by Lee L, et all. Those study declared that enhanced recovery is cost-effective compared with conventional perioperative management for elective colorectal resection. According to our study, there was no difference in the readmission rate after fast track protocols evaluation. The study from Lee L, et al. found that a total of 180 patients were included (conventional care: n=95; ERP: n=95). There were no differences in patient characteristics except for a higher proportion of laparoscopy in the ERP group. Mean length of stay was shorter in the ERP group (6.5 vs 9.8 days; P=0.017), but there were no differences in complications or readmissions.[10]

Perioperative care in the colorectal surgery has been considerably changed recently. The fast track surgery decreases complications rate, shortens the length of stay, improves the quality of life and leads to cost reduction. It is achieved by the resignation of mechanical bowel preparation before and a nasogastric tube insertion after the operation, optimal pain and intravenous fluid management, an early rehabilitation, enteral nutrition and removal of a vesical catheter and abdominal drain if used.[11]

Another study by Liu Z described that the colorectal surgical fast track programs applied to the perioperative period care of rectal carcinoma resection could decrease the hospital stay and surgical complications with no obvious change in readmission rate, so the postoperative recovery of patients with rectal carcinoma resection can be improved. The surgical complications within 30 days postoperatively in the FT group were significantly less than those in the control group (P<0.05). The difference in readmission rate was not significant between the two groups (P=0.326).[12]

It has been demonstrated that the use of drains limits the risk of anastomotic leakage, but, in some cases, the same drains could be the cause of some of the complications. However, surgically placed drains are not without risk. They have been associated with increased rates of infection, abdominal pain, decreased pulmonary function, prolonged hospital stay and organ damage. Some surgeons believe that drainage of the peritoneal cavity is impossible, and therefore, prophylactic drainage is useless.[13] Although there is a considerable theoretical and practical pieces of evidence in favour of drainage, the dispute about "to drain or not to drain" the peritoneal cavity after elective colorectal surgery remains open. Anastomotic dehiscence is a serious complication leading to major mortality and morbidity of colorectal surgery. In order to treat or prevent anastomotic dehiscence, some surgeons routinely use drains. Others use drains only when in doubt, and some never use drains. There is no doubt that once anastomotic leakage has occurred, drains should be used for therapeutic purpose. How- ever, on prophylactic use, no such agreement exists. Pelvic drains are even more commonly used because of higher leakage rates in the pelvic anastomosis. A systematic review of studies suggests that there is insufficient evidence for routine use of drain after colorectal surgery. Despite evidence-based data questioning prophylactic drainage of the abdominal cavity in many instances, most surgeons around the world continue to use drains on a routine basis until now.[12,14]

According to the latest recommendation and guidelines of fast track protocols and ERAS protocols for elective colorectal surgery, in the future for our clinical practice, we could place the intraabdominal drain only for a reasonable indication and the early drain removal could be practised as our routine protocols.

Conclusion

Fast track protocols for early intraabdominal drain removal was safe and not associated with increased risk of surgical site infection and readmission rate.

Ethics committee approval

All sources used for documentation were adequately mentioned concerning copyright laws.

Funding

There was no funding applied for this article.

Conflict of interest

Author declare no conflict of interests.

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