Primary repair in colorectal emergencies

Thesis

Submitted for the Partial Fulfillment of M.D Degree in

General Surgery

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2016

Abstract:

Colorectal emergencies are a common situations that faces surgeons in ER and having different modalities of managements based on doing primary repair of the colon or stomal diversion. We therefore did this prospective study conducted on forty cases represented different conditions of colorectal emergencies (24 cases) of colonic trauma , (10 cases) of obstruction and (6 cases) of peritonitis due to non traumatic colonic perforation regarding surgery and morbidity. Wound infection was the most common complication (65%). Overall mortality was 5%. Morbidity is significantly influenced by an advanced age, ASA score, an advanced lag period (>72 hours) and poor hemodynamic stability at the time of operation. PR is a safe procedure in emergency surgeries as long as patient is stable preoperatively and peritoneal cavity is non compromised. SF seems to be a better option in adverse patient conditions. Patient outcome is influenced by poor clinical parameters and patient demographic in either surgery

Keywords:

Colorectal emergencies, Primary repair in colorectal, colorectal surgeries

Acknowledgement

First and foremost, I feel always indebted to Allah, the kind and merciful.

I would like to express my deep thanks and appreciation to Prof. Dr. ***Alaa El Din Ismail*** Professor of General surgery, Faculty of medicine, Ain Shams University ,for his guidance, help and valuable instructions. I have learned much from him and wish I have learned more.

I am grateful to ***Dr.Yhia Galal Abo Sied*** Consultant and head of General Surgery department Shebin El Kom Teaching Hospital. for his kind support, sincere directions and unlimited encouragement throughout this work.

I wish to acknowledge the extraordinary help I received from ***Dr. Ahmed Gamal El Din Osman*** Lecture of General surgery Faculty of medicine, Ain Shams University , for his support and valuable instructions without his help this work would not be completed.

Thanks are extended to my colleagues in General Surgery department in Faculty of Medicine, Ain Shams University and Shebin El-Kom Teaching Hospital, I greatly appreciate their support and last but not least I would like to thank my patients, to whom I dedicate all my efforts.

Amr Atef

Contents

List Of Abbreviations

SMA	Superior Mesenteric Artery
IMA	Inferior Mesenteric Artery
SMV	Superior Mesenteric Vein
DPL	Diagnostic Peritoneal Lavage
FAST	Focused Assessment for the Sonographic evaluation of the Trauma
DCL	Damage Control Laparotomy
CT	computed tomography
ICI	Intraoperative colonic irrigation
SC	subtotal colectomy
PNTCP	Peritonitis due to non-traumatic colonic perforation
HP	Hartmann's procedure
PA	primary anastomosis
PPD	peritonitis caused by perforated diverticulitis
LGIB	Lower gastrointestinal bleeding
GI	gastrointestinal
IBD	inflammatory bowel disease
AVMS	arteriovenous malformations
NSAID	nonsteroidal antiinflammatory drug
ICU	intensive care unit
NGT	nasogastric tube
EGD	esophagogastroduodenoscopy
(Tc-RBC)	technetium-labeled red blood cell
CTA	Computed Tomography Angiography
DVT	deep venous thrombosis
PE	pulmonary embolism
SISG	Surgical Infection Study Group
AL	Anastomotic Leak
ASA	American Society of Anesthesiologists
TME	total mesorectal excision
CLS	Colon Leakage Score
CRP	C-reactive protein

IAP	intra-abdominal pressure
IAH	intra-abdominal pressure hypertension
ACS	abdominal compartment syndrome
(AAST)	American Association for the Surgery of Trauma
SD	Standard Deviation
$\chi 2$	Chi square
P value	Predictive value

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INTRODUCTION

Introduction

Colorectal emergencies include: traumatic (blunt, penetrating, iatrogenic, .. etc), obstructive (malignant, volvulus, ..etc) and inflammatory (perforated diverticulum, complicated inflammatory bowel diseases,…Etc).

In the beginning of last century treatment of colonic trauma was stomal diversion and this concept start to change in the second half of this century to be primary repair and this change due to development in antibiotics,blood transfusion and ICU protocols ***(C. Gene et al., 1998).***

Stone and Fabian defined the so called "Stone and Fabian" exclusion criteria to determine when to do primary repair of colonic traumas ***(Stone HH et al., 1979).*** Flint and Vitale become more liberal in determining when to do primary repair and modifie the previous exclusion criteria of stone and fabian ***(Flint L et al., 1981).***

No significant changes observed in prospective and retrospective studies which compare the 1ry repair with diversion regarding sepsis whatever mechanism,site,number of associated intra-&extra-abdominal traumas,extended of trauma and patients condition at admission. ***(Sasaki LS et al., 1995).***

Primary repair in treatment of colonic traumas have been pointed out to have better results than diversion in cases have similar general and local trauma and the same intraoperative findings regading mortality,morbidity and final outcome ***(Gonzalez RP et al., 1996) , (Velmahos GC et al., 1996) (Taylor M et al.,2005).***

According to American Association for the Surgery of Trauma (AAST) results of prospective multicenter trial pointed that the main indications for performing stomal diversion are: severe colon edema (whatever the cause),advananced pertonitis and questionable colon blood supply***(Demetriades D, 2004) (Ranko G Lazovic et al. ,2010).***

The previous contraindications to do primary repair in colonic injuries including sever blood loss, contaminating left sided colonic trauma and trauma to more than two organs have been obsoleted by many authors ***(Tzovoras G et al., 2005).***

Primary repair of colon injuries appears safe in the majority in patients after damage control laparotomy primary colonic repair appears to be safe even there are high rate of leak because the open abdomen allow for careful inspection of the abdominal contents at reexploration and identify who require subsequent diversion ***(kashuk jl et al., 2009).***