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UPDATES IN SURGICAL MANAGEMENT OF NON-MALIGNANT LARGE BOWEL OBSTRUCTION

An essay
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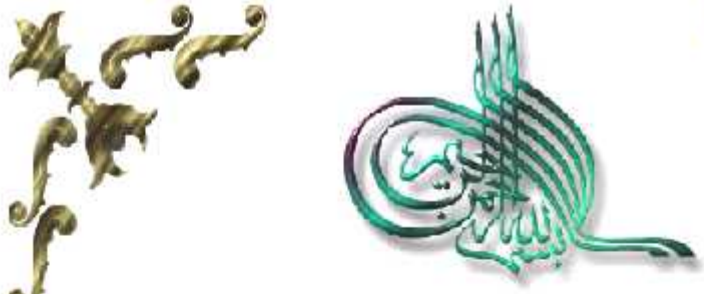

وَقُلِ اعْمَلُوا فَسَيَرَى اللَّهُ
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Rabee Abo Zid Mohamed Kalawa

CONTENTS

LIST OF ABBREVIATIONS

ACH	**:**	Acetylcholine
ALBO	**:**	Acute Large Bowel Obstruction
AXR	**:**	Abdominal X-Ray
CM	**:**	Centimeter
CPM	**:**	Cycle per minute
CT	**:**	Computerized tomography
ENS	**:**	Enteric nervous system
HAC	**:**	High – amplitude contraction
HB	**:**	Hypogastric plexus
HSD	**:**	Hurth's Brung Disease
IBD	**:**	Inflammatory bowel Disease
IMP	**:**	Inferior mesenteric Plexus
LAC	**:**	Low- Amplitude Contraction
LSB	**:**	Long spike Burst
SEC	**:**	Second
SMC	**:**	Smooth muscle cell
SMP	**:**	Superior mesenteric plexus
SP	**:**	Substance(p)
VIP	**:**	Vasoactive intestinal polypeptide

VIT.K	**:**	Vitamine .K
UC	**:**	Ulcerative colitis
WBC	**:**	White blood cells
5HT3	**:**	Serotonin

LIST OF FIGURES

INTRODUCTION

Large bowel obstruction (LBO)-especially acute presentation- is an emergency condition that requires early identification and intervention. The aetiology of (LBO) is age dependent. There are different causes of (LBO) that include neoplasms or anatomic abnormalities, such as volvulus, intussusception, incarcerated hernia, stricture or faecal impaction. The challenge in managing this condition is to verify the different causes of large bowel obstruction, rule out non-surgical causes, and determine the best surgical management **(Lopez-Kostner, *et al.*, 2006)**.

Mechanical obstruction of the large bowel causes bowel dilation proximal to the obstruction. This causes mucosal oedema and impaired venous and arterial blood flow to the bowel. Bowel oedema and ischemia increase the mucosal permeability of bowel, which can lead to bacterial translocation, systemic toxicity, dehydration, and electrolyte abnormalities. Bowel ischemia can lead to perforation and faecalsoilage of the peritoneal cavity **(Nagata, *et al.*, 2008)**.

Pseudo-obstruction is a deceiving cause of (LBO) and the pathophysiology of colonic Pseudo-obstruction is not clear, but it is thought to result from an autonomic imbalance, which results from decreased parasympathetic tone or excessive sympathetic output **(Fazel and Verne 2005)**.

In most patients over 70 years old, the main causes of large bowel obstruction are malignancy, and volvulus of sigmoid colon, the prevalence of both being subject to wide geographical variability **(Finan, 2007)**.

Colorectal cancer is particularly prevalent in the west, accounting for three-quarter of cases of (LBO). This proportion alters in Africa and Eastern Europe where sigmoid volvulus is the cause of obstruction in up to 40% of cases. Approximately 70% of adult intussusception caused by tumors; incarcerated hernia, stricture, or faecal impaction but intussusception most commonly seen in children. In neonates, colonic obstruction may be caused by an imperforate anus or other anatomic abnormalities, meconium ileus.

Less common causes of (LBO) includes diverticular disease, either as a result of stricture or acute inflammation with oedema. Inflammatory bowel disease is an unusual cause of

obstruction but strictures from any cause may precipitate obstruction by proximal faecal impaction **(Van Hooft, *et al.*, 2008)**.

The morbidity and mortality are often related to the surgical procedure used to relieve the colonic obstruction, time of intervention and in long term, to the underlying disease that caused the obstruction. The mortality rate is 15% with early intervention; this increases to 36% if colonic ischemia or perforation develops **(Forloni, *et al.*, 1998)**.

Diagnosis of Large bowel obstruction is depending mainly on clinical history and examination at time of presentation, diagnostic measures as radiology and adjuvant specific measures as sigmoidoscopy or colonoscopy, which are diagnostic in cases of doubt of discovering the cause of obstruction. The diagnostic measures depend on the quality and resources of health services in different hospitals, which vary throughout the world, so exploration is the real and most accurate diagnostic measure in diagnosis of (LBO) especially in 3rd world countries **(Thomas, *et al.*, 2005)**.

Treating patients with large bowel obstruction (LBO) requires careful assessment, through knowledge of possible