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TO EVALUATE ROLE OF VARIOUS CLINICAL AND DIAGNOSTICS PROCEDURES IN DIAGNOSIS OF CAECAL PERFORATION

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Abstract:

Result: Operative Mortality 9%. From the study of this cases it was evident that early operation is essential for the control of shock and hemorrhage. In Our Study 34 cases of traumatic caecal perforation were studied Most of the cases were of assault caused by multiple stab injury over body.

Conclusion: The usual clinical picture was that of young adult recently stabed, who presented the typical signs and symptoms of surgical abdomen. Free air was noted in the abdomen 20% of those patients roentgenografed. The average duration of perforation prior to surgical intervention was between 4 and 5 hours. Right hemicolectomy with ileo- transverse anastomosis was done in maximum cases. This helps reduce mortality in patients undergoing surgery for caecal perforations. Ileostomy-specific complications, however, increase the postoperative stay of the patient. These complications can be reduced, if not outright eliminated, by proper fashioning of the stoma and provision of adequate nursing care of the stoma.

Keywords: Caecal Perforation, Age, Sex & Etiologies.

Introduction

Perforation of healthy caecum is an uncommon condition that is clinically difficult to diagnose and differentiate from other causes of acute abdomen. Perforation of caecum is a challenging surgical problem. Caecal perforation peritonitis is a rare surgical emergency in the Indian subcontinent and in tropical countries.(1)

Caecal perforations are commonly encountered as a part and parcel of various associated disease processes in accordance with LAPLACE LAW. Laplace law dictates that the intraluminal pressure needed to stretch the wall of hollow tube is inversely proportional to its radius. The caecum has largest diameter of the colon, and as such, requires the least amount of pressure to distend(2-3). The diameter of cecum in which perforation is imminent has been estimated to be between 9cms and 16 cms(4).

Material & Method

The study was conducted in the Department of General Surgery, Index Medical College Hospital & Research Centre, Indore, over the period of Eighteen months from Dec 2017 to May 2019 with a Sample Size of 50.

Fifty patients admitted to surgical emergency with acute abdomen were selected for the study. There was not any preoperative selection criteria; the cases which were proven to be cases of perforation peritonitis on the basis of investigations and clinical examination were taken for study and considered for comparative study if laparotomy diagnosed to be case of caecal perforation.

These patients were taken up for emergency surgery after resuscitation, and an informed consent was taken. The antibiotics were given in all groups after admission to hospital and before surgery with 3rd generation cephalosporin (cefotaxime, ceftazidime, ceftriaxone, etc.), Amikacin and metronidazole.

The surgical management was done as primary repair with omental patch, primary repair with defunctioning loop ileostomy, Right hemicolectomy with ileotransverse anastomosis, Right hemicolectomy with double barrel ileo-transverse colostomy depending on pathology. Comparative study was done between group A (Right hemicolectomy with ileotransverse anastomosis) and

group B (primary repair with omental patch, primary repair with defunctioning loop ileostomy, Right hemicolectomy with double barrel ileo-transverse colostomy).

All operations were done by group of three experienced surgeons and they all performed the same technique. All the procedures were carried with hand sewn method. Primary closure was done in two layers, the inner layer closed with 3-0 poly glycolic acid (vicryl) and outer layer closed with silk 3-0. Anastomosis was done with 3-0 poly glycolic acid (vicryl).

Postoperative complications in each group like wound infection, wound dehiscence, intra abdominal abscess, faecal fistula, peritonitis, septicaemia, ileostomy related complications, paralytic ileus and death and so forth are evaluated.

Results

The Mean period of hospitalisation was 13.76 days.

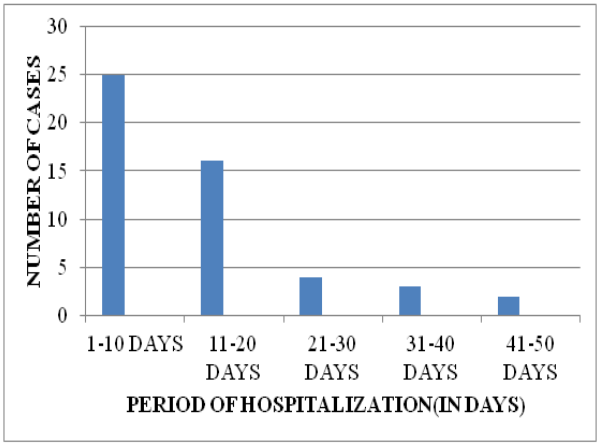

Figure 1: Period of Hospitalization of Patients in Caecal Perforation

CHI SQUARE TEST of statistical significance was applied between group A(right hemicolectomy with ileo transverse anastomosis) and group B(primary repair with omental patch ,primary repair with proximal ileostomy and right hemicolectomy with ileo transverse colostomy) for testing association between between group A and group B.

From total Nine parameters chi square test was found to be significant in seven parameters with p value <0.05.

There was no statistical significance found in two parameters with p value>0.05.

Primary repair of perforation was done with proximal defunctioning loop ileostomy was made. Post operatively ileostomy became functional in all cases and from 3rd to 5th post of day and patients were discharged till 10th post of day. One of the patient with large caecal perforation undergone right hemicolectomy with ileo-transverse anastomosis.

Table 1: Published Etiology of Traumatic Cases of Caecal Perporation

TRAUMATIC	CASES	DIED
GUNSHOT WOUNDS	14	3
STAB WOUNDS	3	0
OPERATIVE WOUNDS	4	0
FOREIGN BODY (TOOTH PICK)	1	0
TOTAL	22	3

Table 2: Operative Management of Traumatic Caecal Perforation

TRAUMATIC	CASES	DIED
CECUM CLOSED NOT EXTERIORIZED	13	0
CECUM EXTERIORIZED	5	1
TUBE CECOSTOMY	2	0
RIGHT COLON RESECTION	1	1
TOTAL	21	2

Operative Mortality 9%

From the study of these cases it was evident that early operation is essential for the control of shock and hemorrhage.

In Our Study 34 cases of traumatic caecal perforation were studied Most of the cases were of assault caused by multiple stab injury over body.

Discussion

A Caecum perforation is a very rare identity. Traumatic caecal perforation are even rare. Caecal perforations are usually seen associated with entities such as diverticular disease, inflammatory bowel diseases, ogilville syndrome[2] closed loop obstructions[5], pancreatic carcinomas[6], colorectal cancers[7], hirschsprung's disease[8] rarely associated with foreign body, in burn patient, tuberculosis infection and following caesarean section or iatrogenic endoscopic procedure. Traumatic causes of caecal perforations are stab wounds, gunshot wounds, operative wounds and foreign body.

Surgery for colonic perforation is associated with high morbidity and mortality rates. Simple closure of the

perforation without exteriorizing the caecum was the procedure most used. Exteriorization of the caecum may be necessary when the duration of the perforation has been prolonged, and when fecal contamination is present. These cases require added hospitalization, extra care for their caecostomy, and a second operation to re-place the caecum into the abdomen. Other surgical options are tube caecostomy, and right colectomy.

Every possible penetrating wound of the abdomen should we explored for the control of shock and hemorrhage & to prevent the spread of infection throughout the abdominal cavity. An innocent external wound may reveal a bowel perforation which may be lethal if missed.

Conclusion

The usual clinical picture was that of young adult recently stabed, who presented the typical signs and symptoms of surgical abdomen. Free air was noted in the abdomen 20% of those patients roentgenografed. The average duration of perforation prior to surgical intervention was between 4 and 5 hours. Right hemicolectomy with ileo- transverse anastomosis was done in maximum cases. This helps reduce mortality in patients undergoing surgery for caecal perforations. Ileostomy-specific complications, however, increase the postoperative stay of the patient. These complications can be reduced, if not outright eliminated, by proper fashioning of the stoma and provision of adequate nursing care of the stoma.

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