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Dr. Yashpal Ramole
Assoc. Prof, Department of
Surgery, Gandhi Medical College,
Bhopal, Madhya Pradesh, India

Dr. Badri Patel
R.S.O, Department of Surgery,
Gandhi Medical College, Bhopal,
Madhya Pradesh, India

Dr. MC Songara
Prof. & Head, Department of
Surgery, Gandhi Medical College,
Bhopal, Madhya Pradesh, India

Dr. Ishant Chaurasia
Asst. Prof, Department of Surgery,
Index Medical College Hospital &
Research Centre, Indore, Madhya
Pradesh, India

To evaluate role of various clinical and diagnostics procedures in diagnosis of caecal perforation

Dr. Yashpal Ramole, Dr. Badri Patel, Dr. MC Songara and Dr. Ishant Chaurasia

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Abstract

Study includes hundred 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.

Inflammatory cause 22 cases (22%) which include caecal perforation secondary to ruptured liver abscess 14 cases, appendicular base with caecal wall perforation 4 cases. Obstructive cause 06 cases (06 %) include obstructed inguinal hernia 02 case, obstructive band 02 case and caecal volvulus 03 case. 04 cases (04%) of caecal perforation secondary to neoplastic etiology were studied. The common etiologies in descending order were Traumatic 68 cases (68%) which include multiple stab injury 40 cases (40%), blunt trauma abdomen 12 cases (12%), iatrogenic 10 cases (10%), caecal perforation secondary to arrow injury 1 case (2%), and blast injury 2 case (4%).

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.

Reducing 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. It should be recommended that ileostomy in these cases is only temporary and the extra cost and cost of management are burden to life of poor community.

Keywords: clinical, diagnostic & caecal perforation.

Study Designed: Observational Study

Introduction

Perforation of caecum is a challenging surgical problem Perforation from different causes present individual problems and demand specific management ^[1]. Thus a perforated caecum resulting from an obstructing carcinoma of sigmoid involves in more complicated management than a simple stab wound of caecum. Perforation of healthy caecum is an uncommon condition that is clinically difficult to diagnose and differentiate from other acute pathological condition.

Because the literature does not show a comprehensive classification for the etiology of perforation, our study of this problem suggest suggest four main etiologic groups – traumatic, obstruction, inflammatory disease & tumors ^[2].

The word cecum or caecum comes from the Latin caecus meaning blind, is an intraperitoneal pouch or a blind ending diverticulum of the large intestine. It exists at the junction of the ileum and the ascending colon. It is considered to be the beginning of the large intestine. The cecum is the first part of the large intestine ^[3].

Material & Method

The study was conducted in the Department of General Surgery, Gandhi Medical College, Bhopal over the period of One Year from July 2018 to June 2019.

Hundred patients admitted to surgical emergency with acute abdomen were selected for the

Corresponding Author:
Dr. Yashpal Ramole
Department of Surgery, Gandhi
Medical College, Bhopal, Madhya
Pradesh, India

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.

Results

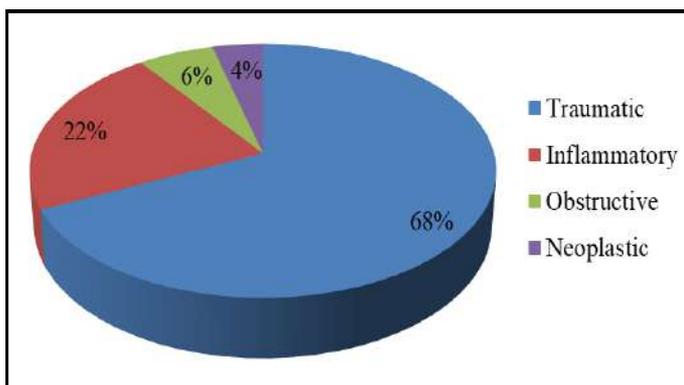
Table 1: Various Etiologies of Caecal Perforation

S. No.	Various Etiologies of Caecal Perforation	No.	Percentage
1.	Traumatic	68	68%
2.	Inflammatory	22	22%
3.	Obstructive	06	06%
4.	Neoplastic	04	04%

Inflammatory cause 22 cases (22%) which include caecal perforation secondary to ruptured liver abscess 14 cases, appendicular base with caecal wall perforation 4 cases.

Obstructive cause 06 cases (06 %) include obstructed inguinal hernia 02 case, obstructive band 02 case and caecal volvulus 03 case.

04 cases (04%) of caecal perforation secondary to neoplastic etiology were studied.



Graph 1: Various Etiologies of Caecal Perforation

Table 2: Percentage of Traumatic Etiology of Caecal Perforation

S. No.	Traumatic Etiology of Caecal Perforation	No.	Percentage
1.	Stab Injury	40	40%
2.	Blunt Trauma	12	22%
3.	Iatrogenic	10	06%
4.	Blast Injury	04	04%
5.	Arrow Injury	02	02%

The common etiologies in descending order were Traumatic 68 cases (68%) which include multiple stab injury 40 cases (40%), blunt trauma abdomen 12 cases (12%), iatrogenic 10 cases (10%), caecal perforation secondary to arrow injury 1 case (2%), and blast injury 2 case (4%).

Table 3: Period of Hospitalization of Patients in Caecal Perforation

S. No.	Period of Hospitalization of Patients in Caecal Perforation	No.	Percentage
1.	01-10 days	25	50%
2.	11-20 days	16	32%
3.	21-30 days	04	08%
4.	31-40 days	03	06%
5.	41-50 days	02	04%

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.

Discussion

During my study, interesting case of caecal volvulus in 25 yr old pregnant female was studied. She developed abdominal distention, vomiting, fever and unable to pass motion and flatus after delivery of her first baby. X-ray abdomen was done, which was suggestive of caecal volvulus [4]. Emergency laprotomy was done through midline vertical incision. On exploration, gangrenous and twisted caecum was found with perforation. Double barrel ileo-colostomy was done. Patient had no post operative complication and ileostomy was functional on third post of day. Patient was discharged on 14th post of day after suture removal with double barrel ileo-colostomy in-situ [5]. Patient came after two month in follow up for stoma closure, that was done after normal DLC. She passed motion and flatus on 4th post of day and was discharged on 7th post of day [6].

A single case of caecal perforation following obstructed inguinal hernia presented in pediatric surgery in one year old child with complaints of pain abdomen and scrotal region. Laparotomy was done and hernia reduced with primary repair of caecal perforation.[7] Post operatively patient had high grade fever and developed scrotal abscess on side of hernia reduction which was drained and managed by regular sterile dressing and intravenous antibiotics, patient was discharged on 12 post -op- day on full diet [8].

Conclusion

Reducing 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.

It should be recommended that ileostomy in these cases is only temporary and the extra cost and cost of management are burden to life of poor community.

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