



# International Journal of Surgery Science

E-ISSN: 2616-3470  
P-ISSN: 2616-3462  
© Surgery Science  
www.surgeryscience.com  
2019; 3(3): 77-78  
Received: 17-05-2019  
Accepted: 19-06-2019

**Dr. Nilesh Kumar Dehariya**  
Dept. of General Surgery,  
Index Medical College Hospital &  
Research Centre, Indore,  
Madhya Pradesh, India

**Dr. Arvind Ghanghoria**  
Dept. of General Surgery,  
MGM Medical College & M.Y.  
Hospital, Indore, Madhya Pradesh,  
India

## To study incidence of caecal perforation relation to age, sex & etiologies

**Dr. Nilesh Kumar Dehariya and Dr. Arvind Ghanghoria**

**DOI:** <https://doi.org/10.33545/surgery.2019.v3.i3b.150>

### Abstract

**Background:** The study was conducted in the Department of General Surgery, Maharaja Yashwant Rao Holkar Hospital and Mahatma Gandhi Memorial Medical College, Indore, Fifty patients admitted to surgical emergency with acute abdomen were selected for the study.

**Result:** Fifty patients with caecal perforation were studied. Caecal perforation was commonly observed in 20-30 years with mean age 30.46 years of life with slightly Male preponderance with M:F ratio 4:1.

The common etiologies in descending order were Traumatic 23 cases (68%) which include multiple stab injury 13 cases (58.82%), blunt trauma abdomen 6 cases (17.65%), iatrogenic 5 cases (14.71%), blast injury 2 case (5.88%) and caecal perforation secondary to arrow injury 1 case (2.94%).

**Conclusion:** Mean age 30.46 years and Mean period of hospitalization 13.76 days. Multiple stab injury (58.82%) being most common traumatic preceding cause.

A high diagnostic accuracy was not associated with an increased rate of perforation. In young children and the middle age group the perforation rate high. Patients with perforation had a significantly longer duration of symptoms as well as in-hospital observation time than did patients with nonperforated.

**Keywords:** Caecal perforation, age, sex & etiologies

### Introduction

Perforation of caecum is a challenging surgical problem Perforation from different causes present individual problems and demand specific management. 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.

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 <sup>[1]</sup> closed loop obstructions <sup>[2]</sup>, pancreatic carcinomas <sup>[3]</sup>, colorectal cancers <sup>[4]</sup>, hirschsprung's disease <sup>[5]</sup> rarely associated with foreign body, in burn patient, tuberculosis infection and following caesarean section or iatrogenic endoscopic procedure.

### Material & Method

The study was conducted in the Department of General Surgery, Maharaja Yashwant Rao Holkar Hospital and Mahatma Gandhi Memorial Medical College, Indore, over the period of Eighteen months from January 2016 to June 2017 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

### Correspondence

**Dr. Arvind Ghanghoria**  
Dept. of General Surgery,  
MGM Medical College & M.Y.  
Hospital, Indore, Madhya Pradesh,  
India

with ileotransverse anastomosis) and group B (primary repair with omental patch, primary repair with defunctioning loop ileostomy, Right hemicolectomy with double barrel ileotransverse 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

**Table 1:** Age Distribution of Caecal Perforation

Age	No.	Percentage
01-10	05	10%
11-20	06	12%
21-30	19	38%
31-40	09	18%
41-50	05	10%
More than 50	06	12%

Fifty patients with caecal perforation were studied. Caecal perforation was commonly observed in 20-30 years with mean age 30.46 years of life with slightly Male preponderance with M:F ratio 4:1.

**Table 2:** Sex Distribution of Caecal Perforation

Sex	No.	Percentage
Male	38	76%
Female	12	24%

Table shows the 38 (76%) males were found and the 12 females (24%).

**Table 3:** Common Etiologies

Etiology	No.	Percentage
Traumatic	23	46%
multiple stab injury	13	26%
blunt trauma abdomen	06	12%
Iatrogenic	05	10%
blast injury	02	04%
caecal perforation	01	02%

The common etiologies in descending order were Traumatic 23 cases (68%) which include multiple stab injury 13 cases (58.82%), blunt trauma abdomen 6 cases (17.65%), iatrogenic 5 cases (14.71%), blast injury 2 case (5.88%) and caecal perforation secondary to arrow injury 1 case (2.94%).

## Discussion

Lawaetz O had reported a case of acute abdomen of a 46 year old male in Midwestern regional hospital, limerick with suspected appendicitis which turned out to be a perforated caecum, a rare complication of acute appendicitis. Perforation at the base of caecum was repaired with an absorbable suture and the omentel patch was used cover the caecum. In presence of uncomplicated perforation, absence of severe infection, and well controlled localized haemostasis, a less invasive approach with post operative intravenous antibiotic would be the management

of choice [6].

Four cases of appendicular perforation at the base of caecum were reported in our institute, during my study. Diagnosis of acute appendicitis was made clinically and the patients were consented for an open appendicectomy in the general anesthesia. During dissection of appendix approximately 2 to 3cm of caecum perforation seen at the base of appendix. Macroscopically appendix was perforated and gangrenous. Perforation was repaired with the absorbable suture and the omental patch was used to cover caecum in two cases. Primary repair with proximal defunctioning ileostomy was done in one case [7].

## Conclusion

Mean age 30.46 years and Mean period of hospitalization 13.76 days. Multiple stab injury (58.82%) being most common traumatic preceding cause.

A high diagnostic accuracy was not associated with an increased rate of perforation. In young children and the middle age group the perforation rate high. Patients with perforation had a significantly longer duration of symptoms as well as in-hospital observation time than did patients with nonperforated.

## References

1. Vanek VW, Al-Salti M. Acute pseudo-obstruction of the colon (Olgivie's syndrome): an analysis of 400 cases. *Dis Colon Rectum* 1986; 29:203-210.
2. Novy S, Rogers LF, Kirkpatrick W. Diastatic rupture of the cecum in obstructing carcinoma of the left colon. Radiographic diagnosis and surgical implications. *Am J Roentgenol* 1975; 123:281-286.
3. Tempia-Caliera AA, Horvath LZ, Zimmermann A, Tihanyi TT, Korc M, Friess H *et al.* Adhesion molecules in human pancreatic cancer. *J Surg Oncol.* 2002; 79:93-100.
4. Carraro PG, Segala M, Orlotti C, Tiberio G. Outcome of large-bowel perforation in patients with colorectal cancer. *Dis Colon Rectum.* 1998; 41:1421-1426.
5. Yamamoto T, Hayashi Y, Suzuki H *et al.* Early onset of cecal perforation in neonatal, recto-sigmoid type Hirschsprung disease. *Acta Pediatr Jpn* 1994; 36:717-9.
6. Lawaetz O, Jensen HK. Survey radiography of abdomen following caesarean section, with particular reference to caecal diameter and the presence of free subdiaphragmatic gas. *Acta Obstet Gynecol Scand.* 1976; 55(4):311-4.
7. Keidar S, Pappo I, Shperber Y, Orda R. Cecal diverticulitis: A diagnostic challenge. *Dig Surg.* 2000; 17:508-12.