



A CLINICAL STUDY OF PERFORATION OF PERITONITIS AT TERTIARY CARE HOSPITAL .

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KEYWORDS :

INTRODUCTION

Gastrointestinal perforation particularly its upper part, constitute the commonest cause of emergencies not only in India but through out the world, leading to sizable number of morbidity and mortality. Despite developments in pre and post operative care, PPI and, various recent drugs, it still remains the common surgical emergency, encountered by surgeons. The causes of perforation and its etiological factors in India differ significantly. Majority of patients report late in hospital due to various unknown reasons, many of them, because of social problem, economical status and this leads to undue delay, and land in septicemia and other complication of perforation peritonitis. Present study was conducted in our tertiary hospital In department of surgery patients admitted in period of 8 months between november 2017 to june 2018

MATERIAL AND METHODS

This retrospective study includes 200 patients admitted in our hospital mostly through emergency section and refer to department of general surgery. It includes all cases who were found to have peritonitis due to perforation of any part of GIT. The exclusion criteria being all cases of primary perforation due to trauma , corrosive , and post operative peritonitis specially due to leakage .All cases in this series were thoroughly studied with respect to clinical faculties at the time of presentation, detailed history including the history of drugs, comorbid conditions, radiological and biochemical investigation, operative finding and first operative course. After conforming the clinical diagnosis of perforation peritonitis and receiving adequate resuscitation patient were taken for surgery and 94% of them were underwent exploratory laparotomy.

On laparotomy the site and size of perforation were noted and managed by appropriate procedure. All patients were treated accordingly either in SICU/ general ward depending on various parameter like, respiratory rate, oxygen saturation , blood pressure and hydration status, under cover of broad spectrum antibiotic. Patients were allowed orally after return of bowel sounds and passage of flatus and stool, ambulation were encouraged as soon as possible, drain tube removed after three to four days when drain fluid was insignificant. Four patients in recent month were laparoscopically treated and result were encouraging.

RESULTS

In our retrospective study on 200 patients for period of four years the highest number of patients below 35-45 year age and mean age was 39.8 ± 12.1 years as shown in table no. 1

TABLE NO. 1

AGE	CASES
<15	9
15-25	18
25-35	49
35-45	24
45-55	51
55-65	31
65 and above	18

SEX -Majority were male 68.8% at a Male: Female ratio of 3:1

EXCLUSION CRITERIA

Respiratory disease, Diabetes mellitus, Renal disease, Hypertension, Tuberculosis, Malignancy

TABLE NO. 2 Symptoms and signs -

Abdomen pain and distension	96%
Nausea and vomiting	48%
Fever	89%
Shock	61%
Tachycardia	97%
Positive H/O NSAIDS (>6 MONTH)	71%

Patient reported with various symptoms and sign like abdomen pain distention, nausea, vomiting etc have been tabled in the Tableno. 2.

TABLE NO. 3 INVESTIGATION

X ray abdomen	93%
Serum Electrolyte	98%
Dehydration	83%
De arranged renal function	28%
Impaired Oxygen saturation	46%

TABLE NO. 4 Site of perforation

Duodenum	107	62%
Gastric Anterior	6	3.6%
Posterior	8	
Jejunum	5	0.86%
Ileum	33	18.3%
Appendix	21	10.7%
Colon	11	7.0%
Gall bladder	9	1.5%

TABLE NO. 5

In majority of patients 62% primary repair with Grahms omental patch repair was shown in table no. 5

Procedure

Primary closure with Grahm's omental patch repair	120	62.6%
Laparoscopic closure with omental patch repair	4	
Primary closure with feeding jejunostomy with omental patch repair	20	10.7%
Primary repair with Resection anastomosis	10	5.9%
Resection with Ileostomy/ Colostomy	21	10.1%
Cholecystectomy	7	1.5%
Appendesectomy	18	30.0%
Primary repair	68	10.9%

TABLE NO. 6 Complication

Wound infection	79	28.2%
Burst abdomen	11	8.6%
Leakage from anastomosis site	2	1.2%
Septicemia	12	6.9%
Renal failure	6	2.4%

DVT	4	1.6%
Abdominal collection	12	10.2%
Chest infection	64	23.9%
Mortality	10	5.5%

Most common complication was wound infection 28% followed by burst abdomen shown in table no.6

DISCUSSION

Peritonitis due to perforation of any hollow viscus is one of the commonest surgical emergency encountered by surgeons. Present study was conducted in our tertiary hospital, total patients reported with male and female ratio being 5:1. but since then, incidence of perforation is falling because introduction of H2 receptor blocker and PPI, there is sharp decrease in elective as well as emergency surgery in western world. Age of patient ranges from less than 15 to above 65 year, majority being in age group of 45-55 years. Majority of patient in tropical countries particularly in India are younger age group as compared to western countries. Etiological factors associated show a wide graphical variation not only in world and India but even in Uttarpradesh as 50% cases of perforation were due to infection like Typhoid and Tuberculosis. In spite of wider use of PPI, incidence of peptic perforation is not coming down, is a matter of research about dietary habits, stress conditions, westernization of food habits and it needs proper health education. as well Perforation peritonitis requires urgent and prompt resuscitation measures, patients need intensive surgical care for dehydration and dearranged electrolytes to achieve good post operative outcome. General condition of patient depends on time of reporting to hospital after the first symptom appears, In our setup majority of patients report to casualty after 48-72 hrs and some even late with gross dyseletroneamia, without pulse and non recordable blood pressure thus could not be operated, have not been included in the study.

The clinical presentation reporting to casualty, depends besides time, on the site of perforation. Abdomen pain and distention were the commonest symptoms in 96% patient, fever 89%, shock in 61%, followed by tachycardia, nausea and vomiting, 71% had positive history of taking NSAID like Steroids and aspirin. These observations were similar to other studies 93% of patients in the study had gas under right dome of diaphragm with air fluid levels on plain x ray abdomen h mortality was due to delay in reporting hospital Peritonitis and intra abdominal infections are not synonym, peritonitis denotes inflammation of peritoneum from any cause while intra abdominal infection is by bacteria. Peritonitis when develops fully passes in three phases

Phase I – Involves rapid removal of contaminants from peritoneal cavity into systemic circulation.

Phase II - Involves synergistic interaction between aerobes and anaerobes.

Phase III - defence attempt by host complements and phagocytes, attempt by host to localize infection in fibrous exudates

The clinical manifestation of peritonitis are fluid shift and metabolic disturbance resulting in tachycardia, increase in respiration rate due to volumetric, intestinal, diaphragmatic, and pain reflexes, metabolic acidosis, increase secretion of aldosterone, ADH and catecholamines subsequently alter the cardiac output and respiration. Acid peptic disease remain the common symptom in majority of patients followed by NSAID complication. Ratio of duodenal and gastric perforation in our study was almost 4:1, in contrast 15:1 to earlier studies. In our study most common cause of perforation was duodenal ulcer, Moreover studies for western countries, perforation due to malignancy was at a higher rate accounting for 15-20%. This is in sharp contrast to various Indian studies (about 2%), we also observed about 1.9% perforation due to malignancies. Over all morbidity data show that maximum number

of cases in post operative period were of wound infection (28.2%), but due to improved preoperative management in our set up mortality rate was not much significant ranging about 5.5% (37 patient) matching.

CONCLUSION

Upper gastro intestinal perforation remains the commonest cause of perforation peritonitis in India, different from western world where trauma being the leading cause. Peptic ulcer perforation being the most common cause in spite of advances and improvement in modern medical facilities, wider use of PPI, health education. Advanced age, associated comorbidities, late reporting to hospitals, delays in surgery were some of factors affecting morbidity and mortality. In our study upper GI perforation was possibly because of massive use of NSAID as many practitioners spacing in remote rural areas massively use these drugs without knowledge of the complication. Besides septicemia and wound infection were major cause of mortality. Early and prompt resuscitation measures, correction of electrolytes and hydration under cover of broad spectrum antibiotics are the pillars to reduce morbidity and mortality.

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