

A Clinical Study on Etiology, Clinical Features of Peritonitis in a Rural Medical College and Hospital

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ABSTRACT

Background: Generalized peritonitis is one of the common surgical emergencies in India and worldwide. The peritoneal cavity is the largest cavity in the body. Peritoneum is divided into visceral and parietal peritoneum. Clinical features are vary and according to the site of the perforation and cause.

Aim of the study: To know the different etiological conditions clinical feature and outcome of the patients in a tertiary care hospital.

Materials and Methods: We have conducted this study in Krishna Mohan medical college, Madhura from June 2018 to May 2019 for nearly 1year in the department of General Surgery. We have included 170 patients in this study.

Results: We have included 170 patients in this study out of these 170 males were 127 and females were 43 the common age group is between 20 years and 50 years duodenal perforation is the common Variety in our study and next common is Ileal & Jejunal variety. Mortality was (10.5%) 18.

Conclusion: Peritonitis is very common surgical problem

diagnosis and early surgical intervention give better results. Delayed diagnosis and delayed treatment affect the prognosis.

Key words: Peritoneum, Infection, Perforation, Mortality, Rigidity.

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INTRODUCTION

Peritoneal cavity is largest cavity in the body. Nearly all varieties of peritonitis are due to bacterial invasion of peritoneal cavity.¹ Generalized peritonitis is results from perforation in the gastro intestine tract. Perforation is an abnormal opening in a hollow organ. Causes of perforation are different from one country to other country.² The major symptoms included pain abdomen, abdomen distention, constipation, vomiting, Diarrhea and fever. The sign and symptoms of perforations peritonitis are typical. Clinical diagnosis can be made on the basis of signs and symptoms. Signs include abdominal tenderness, guarding, rigidity, abdominal distention, decreased bowel sounds tachycardia, tachypnea, oliguria and finally shock. The diagnosis can be made by X-ray chest, ultrasound abdomen and CT Scan abdomen.³ In peritonitis the prognosis depends on age, nutritional status, smoking, alcoholism, drug abuse, cause of peritonitis, site of perforation, delayed treatment leads to multi-organ failure. In developed countries the lower gastrointestinal perforations are common, whereas upper gastrointestinal perforations are common in developing countries. The combination of intensive care support, antibiotics and improved surgical techniques improves the outcome of cases.

In young girls and females pelvic infection via the fallopian tube is responsible for high proposition for 'non-alimentary' infection eg: gonococcus and streptococcus but bacteroids are also found in the female genital tract. Paths of bacterial invasion may be by 1) Direct infection 2) Local extension 3) Blood Stream.

In primary peritoneal infection is not related directly to other intra-abdominal abnormalities. In secondary variety intra-abdominal perforated viscus like peptic ulcer or appendix may be present. The commonest organisms are Escherichia coli, Coagulase negative staphylococci and sometimes cause by multi drug resistance organisms like enterococci, enterobacteria spp, and candida.

MATERIALS & METHODS

We have conducted this study from June 2018 to May 2019 for 1yr in Krishna Mohan medical college in the department of general surgery.

We have examined 170 total no. of Pts out of these 170 Males 127 and Females 43. The age group is around 40 years. After careful history taking and clinical examination, we have advised the investigation like complete blood picture blood grouping & Rh

typing, blood sugar, Blood urea, serum creatinine, X-ray erect abdomen, ultrasound abdomen and CT abdomen also. The mortality in our study is 18no of patients (10.5%) After the resuscitation, Patients were underwent exploratory laboratory post

operatively I.V. anti-biotic were given for 5-10 days after the surgery. The data was systemically analysed and entered in Microsoft excel and values were presented in number and percentages.

Table I: Common age groups.

S.No	Age group inmales	Total Males (127)	Ages group in Female
1	20 – 29	25(14.7%)	12 (27.9%)
2	30 – 39	33(19.4%)	18 (41.8%)
3	40 – 49	42(24.7%)	9 (20.9%)
4	50 – 60	27(15.8%)	4(9.56%)

Table II: Common Symptoms

S.No	Complaints	No. of Pts	Percentage
1	Pain abdomen	170	100%
2	Distension of abdomen	152	89.4%
3	Constipation	143	84.21%
4	Vomiting & Other symptoms	95	55.8%

Table III: Different cause of perforation

S.No	Cause	No. Of Pts	Percentage
1	Acid Peptic disease	92	54.1%
2	Typhoid	26	15.2%
3	Appendicitis	23	13.52%
4	Trauma	39	22.94%

Table IV: Sites of perforation

S.No	Site	No. Of Pts	Percentage
1	Duodenum	76	44.7%
2	Ileum	59	34.70%
3	Gastric	22	12.94%
4	Appendix	13	7.64%

Chart I: Total no. of pts

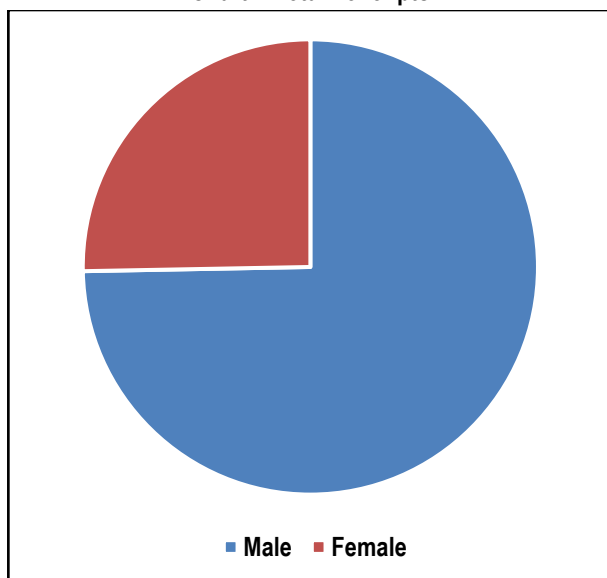
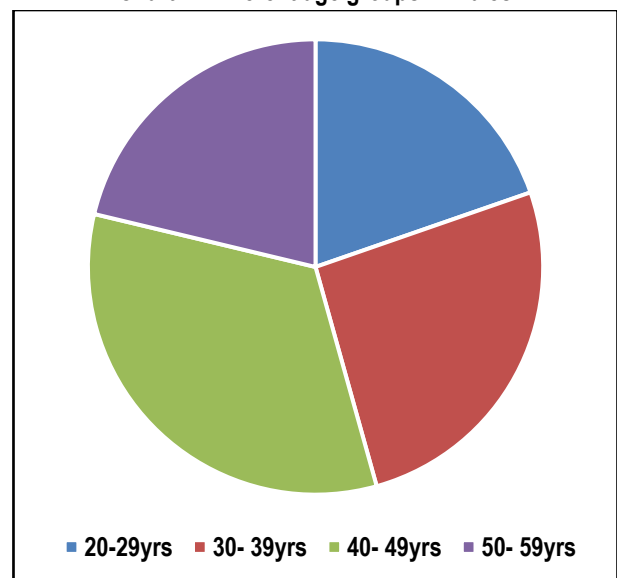


Chart II: Different age groups in Males



RESULTS AND DISCUSSION

The Maximum no. of perforations are seen in younger age group around 3 and 4 decades. 58 no. (14.11%) in males and 30 no. (69.76%) in Females. The Studies conducted by Gupta et al shows almost similar results 43.75% in their study.⁴ The major symptoms in order of frequency are pain abdomen, distension of abdomen, constipation, vomiting and fever. Pain abdomen was seen in nearly 100% Patients when diarrhea and vomiting are seen electrolytes disturbance is seen and sometime associated with shock and these patients will have bad prognosis.⁵ In our study the common cause of perforation are due to acid peptic disease 92no. (54.11%); typhoid 26no. (15.29%) trauma 39no. (22.4%) and appendicitis in 23no. (13.55%). The studies conducted by Salinas et al shows acid peptic disease was 48.75%, typhoid was 19.25% and trauma was 27.25% cases.² Duodenal perforation was seen in 76no. (44.7%); Ileum perforation was seen in 59no. (35.5%). and gastric perforation seen in 22no. (12.94%). The total no. of patients expired 18(11.90%). The mortality in some patients is due to shock, and electrolyte abnormalities. The complications observed are electrolyte imbalance, resp. disorder, leak, abdominal collections. Peritonitis is one of the common surgical emergencies in India and Worldwide also. The common Symptoms in peritonitis are pain abdomen, Distension of abdomen vomiting, Diarrhea fever; the sign included Dehydration, Pallor, Tachycardia, Rigidity, tenderness and some patients may have shock and electrolytes abnormalities. In our study, the common age group involved is 3rd and 4th decades more than 40% in males and more than 30% in Females. The studies conducted by Sharma et al shows 22%.⁵ The reason may be smoking; alcoholism and food habits and young adults prove to have traumatic perforation.

Most common symptom in peritonitis is pain abdomen which is present in almost 100% and distension of abdomen in seen in 89.4% patients. Constipation is seen in 79.5%. These findings are nearly correlating with the studies conducted by Agarwal et al.²

If we analysed the lesions according to site in order of frequency are duodenum, 76 is no (44.70%); Ileum 59 (34.70%); Gastric 22 (12.94%) and appendicular 13 is no (7.64%). The observation made by Ghooi AM et al shows that duodenum was involved in 49.5% and Ileum in 29.76% Appendicular area is 12.6%.⁶ The common causes for perforation peritonitis are acid peptic disease, Typhoid perforation Gangrenous appendicitis and traumatic. In India acid peptic disease is still common in all group population and predisposing factors for acid peptic disease are smoking, alcoholism, spicy food, stress and drugs. In few causes malignancy is also causes perforation.

All gastroduodenal perforates were managed with omentopexy, gastro jejunostomy, resection anastomosis. In our study wound infection is common complication followed by respiratory complication. Chyla study show surgical site infection.⁷

Infection of ascites stimulates a dramatic increase in pro-inflammatory cytokines such as tumor necrosis factor – A TNC-A, inter- Liukin (IL) –I, II, interferon and soluble adhesions molecules in the serum to a much greater extent in the peritoneal exudate even in the presence of perforation, clinical symptoms and signs of peritonitis may be lacking owing to the separation of visceral and partial peritoneum by ascitic fluid.

CONCLUSION

Peritonitis is a common surgical emergency. Mostly seen in young adults. Males are commonly affected than Females. Delayed diagnosis and management lead to increased mortality. The habits like smoking, alcoholism also prone to develop perforation due to acid peptic disease. Early diagnosis and appropriate antibiotics with good surgical techniques the prognosis is good.

REFERENCES

1. Short practice of surgery by Bailey and Love. 22nd ed 1997; chap: 4; 764.
2. Nitin Agarwal, Sudipta Saha, Anurag Srivastava, Sunil Chumber, Anita Dhar, Sanket Garg. Peritonitis in a single 10 years experience in a single surgical unit. Trop Gastroenterol. Jul-Sep 2007;28(3):117-20.
3. Salinas RC, Ramkrishan K, Peptic ulcer disease AM Sam physician, 2007; 76;1005-12.
4. Gupta S. Dorei Rajan. Peritonitis in India. A decade's experience Trop. Gastroenterol. 1995;16;33-8.
5. Sharma L, Guptas Generalized peritonitis in India. The topical spectrum Jpm. J. Sury. 1991;21;272-7.
6. Ghooi, AM, Punjwan. S Acute abdomen emergencies clinical overview Ind. J. Surg. 1978; 140; 182-9.
7. Clyle P. Jaka HM, clinical profile and outcome of surgical treatment of perforated peptic ulcers in Northwest- Tayaina, world. J. Emerg. Surg; 2011;6;31.

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