



Presentation of Peptic Perforation Patients among Non Traumatic Perforation Patients

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ABSTRACT

Background: *Gastrointestinal perforation constitutes one of the most common causes of surgical emergency. The main objective was to study incidence of peptic perforation peritonitis and there sign, symptoms and various factors affecting morbidity and mortality.*

Method: *It was prospective 1 year study conducted in surgical ward of Department of surgery SGMH Rewa (M.P.) during the period August 2014-July 2015. A 162 cases of peptic perforation peritonitis were studied, out of 277 of all non traumatic perforation cases. Patients are selected on the basis of symptom, sign at the time of admission and operative finding. All patients have been studied and results are analysed.*

Result: *in study, maximum number of cases were of Peptic perforation (58.48%), peptic perforation cases were reported throughout the year with higher incidence in month of October 2014 and January 2015, incidence of peptic perforation was recorded in the age group of 41-60 years(22.74%), followed by 21-40 years of age (22.38%), Peptic perforation found to be predominant in rural population accounting for 83.95% of total nontraumaic perforation cases, pain abdomen was present in all cases of peptic perforation. Next common symptom in peptic perforation was distension (95.67%) and constipation (82.71%), Tenderness and distension was present in all cases of peptic perforation, In peptic perforation there was Guarding in 98.8% cases and absent Bowel sounds in 96.3%, that escape of gas (92.59%) and fluid (91.35%) were found in peptic perforation during laparotomy, Adhesion was present in 51.85%. Gastric perforation was found in 72.22% of cases and duodenal perforation 27.77% cases, Respiratory infection was most common systemic complication (17.28%), followed by Toxaemia (10.49%). Wound infection was most common local complication (25.30%) mortality in peptic Perforation was 12.96%. Operative interval was taken as the time from the onset of first symptom till the patient was treated surgically. In case of peptic perforations which were operated before 72 hours mortality was 5.35%, which was less than those operated after 72 hours (16.98%),Mortality in case of Intra-peritoneal drainage followed by operation was 12.06%, which was less than patient that operated without intra-peritoneal drainage (13.46%).,Peptic Perforation operated by Simple closure + Omentopexy had mortality 11.53% which was lower than that patients operated by Omentopexy only (13.63%), average hospital stay in case of Peptic Perforation was 12 days.*

Conclusion: *Peptic perforation is a serious emergency. Patient presentation mainly decided the mortality and morbidity of patients. Young age and early presentation associated with favourable prognosis and old age and late presentation associated with higher mortality. operative procedure like omentopexy is sufficient. Proper resuscitation at presentation and better post operative care can decrease the harmful and worse sequence of this condition.*

Keywords: *peptic Perforation, Distribution, Mortality, omentopexy, laparotomy.*

Introduction

Peritonitis is an inflammatory condition of the peritoneum. The process may be acute or chronic; it may be septic or aseptic and primary or secondary.

Peritonitis has been studied by number of workers from many different angles during last century. Clinical observations of the varied manifestation of disease were reported and also studied experimentally. Perforation of peptic ulcer is common cause of morbidity and mortality in patients of peptic ulcer disease. Although the incidence of peptic ulcer disease has declined during last three decades, due to H2 receptor antagonists and proton- pump inhibitors, although the incidence of patients who have developed perforation of peptic ulcer has increased. The demographic pattern also has changed. Previously these patients were typically young and middle aged men with a history of peptic ulcer disease, they now tend to be elderly and chronically ill

patients who are often taking medications specially NSAIDS. The management of peptic perforation is surgical primarily.

Material and Method

It was prospective 1 year study conducted in surgical ward of Department of surgery SGMH Rewa (M.P.) during the period August 2014-July 2015. A 162 cases of peptic perforation peritonitis were studied, out of 277 of all no traumatic perforation cases.

RESULT

Prevalence among other perforations-

It is evident from the below table that maximum number of cases were of Peptic perforation (58.48%). Among all, total 277 cases of no traumatic patients of perforation peritonitis, 162 patients of gastric perforation recorded during study.

Table No-1 Distribution of cases according to aetiology

S. No.	Aetiological factors	No. Of Cases	Percentage
1	Peptic perforation	162	58.48%
2	Typhoid perforations	84	30.32%
3	Appendicular perforation	12	4.33%
4	Tubercular perforation	07	2.52%
5	Others	12	4.33%
Total		277	100

Month wise prevalence of peptic perforation-

It is evident from the below table that Peptic perforation cases were reported throughout the year with higher incidence in month of October

2014 and January 2015. There is seasonal variation in the presentation of peptic perforation and minimal patients seen in the season of summer.

Table No. 2 Month -wise Distribution of Cases

S. N.	Month	Total Cases		Peptic perforation		Typhoid Perforation		Appendicular perforation		Tubercular perforation		Others	
		No	%	No	%	No	%	No	%	No	%	No	%
1	Aug 14	28	10.1	13	8.02	12	14.28	02	16.7	00	00	01	8.3
2	Sep 14	27	9.74	14	8.64	10	11.90	01	8.33	00	00	02	16.6
3	Oct 14	27	9.74	18	11.1	05	5.95	01	8.33	01	14.28	02	16.6
4	Nov 14	25	9.02	17	9.87	06	7.14	02	16.7	00	00	00	00
5	Dec 14	18	6.49	11	6.79	04	4.76	02	16.7	00	00	01	8.3
6	Jan 15	27	9.74	18	11.1	06	7.14	00	00	02	28.57	01	8.3
7	Feb 15	22	7.94	16	9.87	05	5.95	00	00	01	14.28	00	00
8	Mar 15	21	7.58	12	7.40	07	8.33	00	00	01	14.28	01	8.3
9	Apr 15	18	6.49	08	4.93	08	9.52	00	00	01	00	02	16.6
10	May 15	26	9.38	16	9.87	07	8.33	01	8.33	00	00	02	16.6
11	Jun 15	16	5.77	06	3.70	07	8.33	02	16.7	01	14.28	00	00
12	July 15	22	7.94	14	8.64	07	8.33	01	8.33	00	00	00	00
Total		277	100	162	58.4	84	30.32	12	4.33	07	2.52	12	4.33

Age wise distribution-

It is evident from the below table that highest incidence of peptic perforation was recorded in

the age group of 41-60 years (22.74%), followed by 21-40 years of age(22.38%).

Table No.3 Distribution of Cases According to age group [n-277]

S.N	Age Group[Yrs]	Total	Peptic Perforation		Typhoid Perforation		Appendicular Perforation		Tubercular Perforation		others	
			No.	%	No.	%	No.	%	No.	%	No	%
1	0-20	40	03	1.08	31	11.19	02	.72	03	1.08	01	.36
2	21-40	117	62	22.38	38	13.71	07	2.52	03	1.08	07	2.52
3	41-60	81	63	22.74	13	4.69	03	1.08	01	.36	01	.36
4	>60	39	34	12.27	02	.72	00	00	00	00	03	1.08
Total		277	162	58.48	84	30.32	12	4.52	07	2.52	12	4.52

Distribution according to residence-

It is evident from the below table that overall perforations were more common in rural population; Peptic [83.95%],

Table No.4 Distribution of Cases According to Residence

S. N.	Disease	Total Cases	Rural		Urban	
			No.	%	No.	%
1	Peptic Perforation	162	136	83.95	26	16.04
2	Typhoid Perforation	84	68	81.48	16	18.51
3	Appendicular Perforation	12	04	33.33	08	66.66
4	Tubercular Perforation	07	06	80	01	20
5	Others	12	11	91.66	01	8.33
Total		277	225	81.22	52	18.77

Distribution of different complaints in peptic perforation-

It is evident from above table that pain abdomen was present in all cases of perforation. Next

common symptom in peptic perforation was distension (95.67%) and constipation (82.71%), vomiting present in 30.8% and fever in 64.8% cases.

Table No.5 Distribution of cases according to different types of Presenting Complaints

S. N	Presenting Complaints	Peptic Perforation (n-162)		Typhoid Perforation (n-84)		Appendicular Perforation(n-12)		Tubercular Perforation(n-07)		Others (n-12)		Total (n-277)	
		No	%	No	%	No	%	No	%	No	%	No	%
1	Pain Abdomen	162	100	84	100	12	100	07	100	12	100	277	100
2	Distension of Abdomen	155	95.6	68	80.9	09	75	06	86	10	83.3	249	89.9
3	Vomiting	50	30.8	33	39.3	03	25	03	43	05	41.6	95	34.3
4	Constipation	134	82.7	73	86.9	04	33.3	06	86	09	75	228	82.3
5	Fever	105	64.8	75	89.2	10	83.3	05	71	05	41.6	202	72.9

Operative finding of peptic perforation-

It is evident from below table that escape of gas (92.59%) and fluid (91.35%) were found in peptic perforation during laparotomy. Adhesion was

present in 51.85%. Gastric perforation was found in 72.22% of cases and duodenal perforation 27.77% cases.

Table No.6 Operative Findings in Peptic Perforations (n-162)

SN	Findings	No. Of Cases	Percentage
1	Escape of Gas	150	92.59
2	Escape of fluid	148	91.35
3	Adhesion	84	51.85
4	Gastric perforation	117	72.22
5	Duodenal perforation	45	27.77

Post operative complication of peptic perforation-

It is evident from below table that Respiratory infection was most common systemic complicat-

ion [17.28%], followed by Toxaemia [10.49%]. Wound infection was most common local complication [25.30%].

Table No.7 Post operative complication of Peptic perforation (n-162)

S. No.	Complication	No of Cases	Percentage
1	Respiratory infection/Distress (Systemic)	28	17.28
2	Toxaemia (Systemic)	17	10.49
3	Wound infection (Local)	41	25.30
4	Wound Gaping (Local)	18	11.11
5	Faecal Fistula (Local)	07	4.32
6	Burst abdomen(Local)	07	4.32

Mortality pattern of peptic perforation-

It is evident from below table that mortality in peptic Perforation was 12.96%. Operative interval was taken as the time from the onset of first symptom till the patient was treated surgically. In case of peptic perforations which were operated before 72 hours mortality was 5.35%, which was less than those operated after 72 hours (16.98%).

Mortality in case of Intra-peritoneal drainage followed by operation was 12.06%, which was less than patient that operated without intra-peritoneal drainage (13.46%). Peptic Perforation operated by Simple closure + Omentopexy had a mortality 11.53% which was lower than that patients operated by Omentopexy only (13.63%).

Table No.8 Mortality in Peptic Perforation Cases

S. N.	Factors	Peptic perforation		
		Total no. of cases	DEATH	%
1	No of Patients	162	21	12.96
2	Operative interval			
	≤72 Hrs	56	03	5.35
	>72Hrs	106	18	16.98
3	Intra-peritoneal drainage done/not			
	Intra-peritoneal drainage followed by definitive repair	58	07	12.06
	Definitive repair	104	14	13.46
4	Operative procedure			
	Simple Closure +Omentopexy	52	06	11.53
	Omentopexy	110	15	13.63

Average hospital stay in case of peptic perforation-

It is evident from above table that average hospital stay in case of Peptic Perforation was 12 days

Table No. 9 Distribution of cases in relation to Hospital Stay

S. N.	Hospital Stay	Peptic Perforation	Typhoid Perforation	Appendicular Perforation	Tubercular Perforation	Others
1	≤14	126	48	12	03	05
2	15-30	30	32	00	04	07
3	>30	06	04	00	00	00
Average Stay		12	16	9	13	15

Discussion

Peptic perforation is a surgical emergency. Patient can present in a spectrum of disease. Patient present in early stage of peritonitis and without septicaemia have better and good post operative recovery and less mortality as compare to late and terminal stage of peritonitis patients. Present study of peptic perforation done in 277 patients of no traumatic perforation show similar trends of perforation in comparison to previous studies.

In our study we found 58.48% patients having perforation at the gastro duodenal region, which was more than studies by Doraijanet al⁸ (32%) and Khan et al⁹ (38.8%). This is because of over the counters use of analgesic, steroid and most of the patient in our study from rural, old age population. Perforations due to peptic ulcer disease were seen to be the most common cause of perforations consistently in all studies .this trends is decreasing in comparison to previous studies by various authors. This decreasing trend may be because of

early treatment of acid peptic disease and use of upper GI endoscopy.

Peptic perforation cases occurred maximum in the month of October and January (11.11%) which is almost similar to study done by Lal M. V et al¹ and L. M. Singh et al².

Maximum incidence of peptic perforation was in 41-60 years age group (22.74%) followed by 21-40 years of age (22.38%) that was similar to the study done by Singh R. B.1998, Lal M. V et al¹ and L. M. Singh et al².

In present series overall perforation was more common in rural population; Peptic (83.95%), that was similar to the study done Lal M.V et al¹ and L.M. Singh et al². This may be because of malnutrition, poor hygiene, deficient health education, addiction, over the counter medication, treatment by quacks.

The most common symptom in all the study groups was pain abdomen in general. In our study all the patients (100%) had pain abdomen which

was quite comparable to be the most common mode of presentation, Yadav et al³ who reported 73.6% quite predominantly comparable to our study. . Next common symptom in peptic perforation was distension (95.67%) and constipation (82.71%), vomiting present in 30.8% and fever in 64.8% cases, which was similar to study of singh et al⁷, desai et al⁶ and afridi et al⁶.

In our study infection was most common systemic complication [17.28%], followed by Toxaemia [10.49%]. Wound infection was most common local complication [25.30%]. Toxaemia was seen in 10.49% of the patients in this study. Jhobta et al⁴ reported 17%, Afridi et al⁵,20% and Yadav et al³ 5.2% of their patients having a septic shock in postoperative period.

Mortality in peptic Perforation was 12.96%. Which was quite similar to study done by Jhobata et al⁴ (10%), Afridi et al⁵ (10.6%) and Yadav et al³ had a mortality rate of13%. Overall mortality has now decreased due to better understanding of patho-physiology, wide spread use of better preoperative resuscitation measures, better antibiotic, safer anaesthesia, early patient reporting and better post-operative management in intensive care set up as required. Highest mortality is seen in duodenal perforation especially associated with severe peritoneal Contamination.

In present study average hospital stay in peptic perforation was 12 days, Minimum 5 days and maximum 47 days. That was less than Lal M. V.et al¹ and L.M. Singh et al².This could be due to early surgical intervention, improvement in surgical technique, early recognition of complication and prompt treatment

Conclusion

It is concluded from our study that peptic perforation is a common emergency surgical problem encountered by a general surgeon. The need for an early and accurate management is necessary, because if not treated timely the result will be fatal. Operation is the treatment of choice and should be done as early as possible after

proper resuscitation, if the general condition of patient permits.

Delay will make them unable to tolerate added stress of general anaesthesia and operation. Mortality in operative mode of treatment is least as compared to other modes.

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