

Prospective Analysis of Outcome in Patients with Peptic Ulcer Perforation in Tertiary Care Hospital

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Abstract: ***Aims and Objectives:** To determine the age & sex incidence in peptic ulcer perforation patients. To determine the incidence of perioperative complications. To analyse the effect of time of presentation on morbidity and mortality in patients with peptic ulcer perforation. To analyse various factors effecting the morbidity and mortality in patients with peptic ulcer perforation. **Material and Methods:** This is a 1 year prospective study which includes 50 cases, i.e., at Kamineni Institute of Medical Sciences Narketpally. All the 50 cases were admitted in KIMS Narketpally diagnosed with gastric & duodenal ulcer perforation were included in the study. All the cases admitted in KIMS Narketpally diagnosed with gastric ulcer perforation. **Results:** This is a prospective analysis of outcome in patients with peptic ulcer perforation. Out of 50 patients 90 % are male and 10 % are female. 74 % presented early and 26 % presented late 36 % are with co-morbidities. 22 % used NSAIDS 20 % had PUD 88 % have addictions 2 % had preoperative shock and 2 % had AKI. 66 % had Duodenum ulcer and 34 % had gastric ulcer 8 % have wound infection, 10 % had ileus and 4 % had leak 10 % had pulmonary complications 2 % had wound dehiscence, 8 % had sepsis and 2 % died. **Conclusion:** Among 50 patients, most common postoperative complication was Ileus and pulmonary complications in about 10 % patients followed by Wound infection and sepsis. Risk factors for morbidity and mortality in perforated peptic ulcer were age 65 years, associated medical illness, alcohol consumption, duration of perforation more than 24 hours before surgery and presence of shock on admission.*

Keywords: Gastric Ulcer, Duodenal Ulcer, Peptic Ulcer Perforation, Shock, Morbidity, Mortality

1. Introduction

- Peptic ulcer disease refers to group of ulcerative disorders of the upper GI tract that require acid and pepsin for their formation
- Most peptic ulcers are caused by *H. pylori* or NSAIDs and changes in epidemiology mirror changes in these principal aetiological factors
- Duodenal ulcers are more common than gastric ulcers, but the symptoms are indistinguishable
- Gastric ulcers may become malignant and an ulcerated gastric cancer may mimic a benign ulcer
- Gastric antisecretory agents and *H. pylori* eradication therapy are the mainstay of treatment, and elective surgery is very rarely performed
- The long-term complications of peptic ulcer surgery may be difficult to treat
- The common complications of peptic ulcers are perforation, bleeding and stenosis
- The treatment of the perforated peptic ulcer is primarily surgical, although some patients may be managed conservatively

Aims and Objectives

- To determine the age, sex, intra-operative and perioperative complications incidence in peptic ulcer perforation patients.
- To analyse the effect of time of presentation on morbidity and mortality in patients with peptic ulcer perforation.

2. Materials and Methods

- An observational prospective study of 50 cases of peptic ulcer perforation in Department of General Surgery at KIMS Narketpally
- All patients underwent plain x-ray chest, erect abdomen and relevant investigations done.

- Emergency exploratory laparotomy and simple closure with
- Graham's omental patch done.
- Patients divided into 3 groups- Iatrogenic gastro duodenal perforation, Traumatic perforations of stomach and duodenum, Malignant perforations of stomach and duodenum.
- Data collected and statistically analyzed

3. Results

Table 1: Age and Sex Wise Incidence (n=50)

Age (years)	Males		Females		Total	
	No.	%	No.	%	No.	%
12-20	2	4.5	0	0	2	4.5
21-30	2	4.5	0	0	2	4.5
31-40	11	22	0	0	10	22.7
41-50	15	30	0	0	12	27.27
51-60	11	22	2	4	11	25
61-75	4	9.09	3	6.81	7	15.90
Total	45	90	5	10	50	100

Table 2: Age Related Morbidity and Mortality (n=50)

Age in Years	No. Of Patients (%)	Morbidity (%)	Mortality (%)
12-20	2(4.5)	0	0
21-30	2(4.5)	0	0
31-40	11(22)	0	0
41-50	15(30)	2(4)	0
51-60	12(24)	8(16)	0
61-75	7(15.90)	7(15.90)	1(2.27)

Table 3: Morbidity and Mortality in relation to NSAIDs, Smoking, Alcohol (n=50)

Parameter	Total	Morbidity	Mortality
NSAID/Corticosteroids	11(22)	8(16)	0
History Of Smoking and Alcoholism	44(88)	17(34)	1(2.27)
History of Peptic Ulcer Disease	10(20)	7(14)	0

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Table 4: Morbidity and Mortality in relation to pre-operative shock and time of surgery (n=50)

Parameter	Total	Morbidity (%)	Mortality (%)
Pre- Operative Shock	1(2)	0	1(2)
Time of Presentation	Early<24 hrs	41(74)	7(15.9)
	Late	9(26)	7(15.9)

Table 5: Type of perforation predicting mortality and morbidity (n=50)

Sites of Perforation	Total	Morbidity (%)	Mortality (%)
Duodonal	33(66)	10(17)	0
Gastric	17(34)	7(15.9)	1(2.27)
Total	50	17	1

Table 6: Postoperative Complications (n=50)

Complications	Number	%
Paralytic Ileus	5	10
Pulmonary Complications	5	10
Wound Infections	4	8
Wound Dehiscence	1	2
Renal Failure	1	2
Sepsis	4	8
Leak	2	4
Death	1	2

Table 7: Various factors predicting the morbidity in patients with peptic ulcer perforation cases (n=50)

Parameter		No.	Morbidity	%
Age	<60	42	12	28.5
	>60	8	8	100
Sex	Male	45	15	33.3
	Female	5	3	60
NSAID & Corticosteroid Use	Present	11	6	54.5
	Absent	39	10	25.6
Smoking & Alcohol	Present	44	17	38.63
	Absent	6	2	66.6
PUD	Present	9	6	66.6
	Absent	41	10	27.7

4. Discussion

- This is a prospective analysis of outcome in patients with peptic ulcer perforation.
- Out of 50 patients 90% are male and 10% are female.
- 74% presented early and 26% presented late
- 36% are with co-morbidities.
- Noguiera Cet al 2003 and Testini M et al 2003 has showed presence of pre- existing medical illness as significant predictor of morbidity and mortality
- 22% used NSAIDS
- In a study by Kocer et al. in 2007, 8.9% patients had history of regular ingestion of NSAIDs
- In study by J. C. Dakubo et al. in 2009, it was 28.22% and they showed increase in the morbidity.
- 20% had PUD
- 88% have addictions
- In a study by Kocer et al. in 2007, 73.2% patients had history of regular smoking
- in study by J. C. Dakubo in 2009, it was 9.81%
- In a study 1 by Kocer et al. in 2007, 12.3% patients had history of regular alcohol consumption
- In study by J. C. Dakubo in 2009, it was 38.03%.
- 2% had preoperative shock and 2% had AKI.

- 66% had Duodenum ulcer and 34% had gastric ulcer
- 8% have wound infection, 10% had ileus and 4% had leak
- 10% had pulmonary complications
- In a study by Kocer et al. in 2007, J. C. Dakubo in 2009 showed an increased in morbidity due to pulmonary complications
- 2% had wound dehiscence, 8% had sepsis and 2% died.

5. Conclusion

- Among 50 patients, most common postoperative complication was Ileus and pulmonary complications in about 10% patients followed by Wound infection and sepsis.
- Risk factors for morbidity and mortality in perforated peptic ulcer were age 65 years, associated medical illness, alcohol consumption, duration of perforation more than 24 hours before surgery and presence of shock on admission.

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