

A Clinical Profile of Perforated Duodenal Ulcer

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Abstract

Background: Duodenal ulcer is a common condition characterized by the presence of a well- demarcated break in the mucosa that may extend into the muscularis propria of the duodenum.

Methods: This prospective observational study was conducted in the Department of Surgery on patients showing clinical signs and symptoms of perforated duodenal ulcer. The diagnosis of duodenal ulcer perforation was that established by the admitting surgeon, based on clinical features and supposed by radiological evidence and confined at operation.

Results: In our study majority no of patients were labourer' s (32%), farmers and private job employee (14% and 14%) respectively. Other participants in the study belong to numerous other profession including Student's (12%), Govt. job employee (8%), Retired govt . job employee(8%), Housewife (8%) and other various profession

Conclusion: Perforation of duodenal ulcer remains a frequent clinical problem in our environment predominantly affecting young age group labourer males known to suffer from duodenal ulcer.

Keywords: Duodenal Ulcer, Perforation, Clinical Profile

Introduction

Peptic ulcer disease (PUD) represents a worldwide health problem because of its high morbidity, mortality and economic loss ¹. In the United States, approximately 5 million adults suffer annually from peptic ulcer disease and 500.000 new cases with 4 million recurrences are reported each year ².

Globally, the incidence of peptic ulcer disease has fallen in recent years. Despite this and recent advances in both diagnosis and management of peptic ulcer disease, namely the improvement in endoscopic facilities, eradication of H. pylori and the introduction of the proton pump inhibitors, complications such as peptic ulcer perforation remain a substantial healthcare problem. This may be due to an increase in the risk factors for peptic ulcer complications. ³

When acute or chronic duodenal ulcer perforates into the peritoneal cavity, three components require treatment viz., the ulcer, the perforation and the resultant peritonitis. The perforation and resultant peritonitis are immediate threats to the life; the ulcer in itself is not. The therapeutic priorities thus are treatment of peritonitis and securing the closure of perforation, which may be achieved with

surgical procedure. In spite of better understanding of disease, effective resuscitation and prompt surgery under modern anaesthesia techniques, there is high morbidity and mortality. Hence, attempt has been made to analyze the various factors, which are affecting the morbidity/mortality of patients with peptic ulcer perforations.

Religion	No. patients	Percentage
Hindu	47	94.00%
Muslim	3	6.00%

Material and Methods

This prospective observational study was conducted in the Department of Surgery on patients showing clinical signs and symptoms of perforated duodenal ulcer. The diagnosis of duodenal ulcer perforation was that established by the admitting surgeon, based on clinical features and supposed by radiological evidence and confined at operation.

Exclusion Criteria: Patients with peritonitis cause other than duodenal ulcer perforation.

Data-analysis: To collect required information from eligible patients a pre-structured pre-tested proforma was used. For data analysis Microsoft excel and statistical software SPSS was used and data was analyzed with the help of frequencies, figures, proportions, measures of central tendency and appropriate statistical test.

Results

In the present prospective study, we had taken 50 patients

Age	No. of patients	Percentage
0-18	2	4.00%
19-45	32	64.00%
46-60	13	26.00%
>60	3	6.00%

of peritonitis due to duodenal ulcer perforation.

Table no. 1 Age distribution of cases

The age of the patients in our study ranged from 11 to 70

Sex	No of Patients	Percentage
Male	44	88.00 %
Female	6	12.00 %

years with a mean age of 45.11 years, Maximum no of patients 64.00% were of age group 19-45years.

Table 2: Showing sex distribution

The sex distribution of the study showed that 44 out of 50 patients were male and 6 patients were female.

Table no. 3 Religion of patients presented with perforation In our study out of 50 patients 47 were hindu.

Table no. 4 Occupation of patients presented with Perforation

Occupation	No. of patients	Percentage
Labourer	16	32%
Farmer	7	14%
Private job	7	14%
Student	6	12%
Govt. job employee	4	8%
Retired govt. employee	4	8%
Housewife	4	8%
Other	2	4%

In our study majority no of patients were laborer's (32%), farmers and private job employee (14%and 14%) respectively. Other participants in the study belong to numerous other profession including Student's (12%), Govt. job employee (8%), Retired govt. job employee (8%), Housewife (8%) and other various profession

Table No. 5 Time of presentation after onset of symptoms

Time of presentation	Frequency	Percentage
<24 hours	5	10%
24 – 48 hours	33	66%
>48 hours	12	24%

In our study 5 patients (10%) presented within 24 hours after onset of symptoms. Thirty nine (66%) patients presented between 24 – 48 hours whereas 12 (24%) patients presented after 48 hours.

Discussion

The age of the patients in our study ranged from 11 to 70 years with a mean age of 45.11 years, Maximum no of patients 64.00% were of age group 19-45years which is in contrast to the study done by Brock J et al⁴ in which peak incidence of peptic ulcer disease was seen in 70years of age. Studies done by Nishith M et al⁵ and Hannan et al⁶ had a mean age of 36 years and 41 years respectively which is comparable to our study in which incidence is seen more in young population.

In this study sex distribution showed that 44 out of 50 patients were male and 6 patients were female which is in comparable to the studies done by Zahid Aman et al⁷ and Nishith M et al⁵ with the incidence of duodenal ulcer 90% and 78% respectively in males.

In our study majority of patients i.e 90 % presented after 24hours of onset of symptoms which is in comparable to the study done by Nishith M et al⁵ in which majority of patients presented after 24 hours however study conducted by Everett et al⁴⁴ observed that 68% patients presented to hospital within 24 hours of onset of symptoms. The delay of presentation to the hospital in our study can be explained on the basis of lack of awareness, illiteracy and referral units.

Conclusion

Perforation of duodenal ulcer remains a frequent clinical problem in our environment predominantly affecting young age group labourer males known to suffer from duodenal ulcer.

References

1. Türkdoğan MK, Hekim H, Tuncer İ, Aksoy H. The epidemiological and endoscopic aspects of peptic ulcer disease in Van region. Eastern Journal of Medicine. 1999;6(1):6-9.

2. Isenberg JI, McQuaid KR, Laine L, Rubin W. In: Textbook of Gastroenterology. Yamada T, editor. J.B Lippincott comp., Philadelphia; 1991. Acid-peptic disorders; pp. 1241-98. ch.61.
3. Elnagib E, Mahadi SE, Mohamed E, Ahmed ME. Perforated peptic ulcer in Khartoum. Khartoum Medical Journal. 2008;6(2):62-64.
4. Brock J, Sauaia A, Ahnen D, Marine W, Schuler W, Stevens VR et al. Process of care and outcomes for elderly patients hospitalized with peptic ulcer disease: Results from a quality improvement project. JAMA 2001;286:1985.
5. Paul Ekka NM, Malua S. Clinical study of peptic ulcer perforation in eastern India: An tertiary institution-based study. Int J Med Sci Public Health 2016;5:2540-2544.
6. Hannan A, Islam B, Hussain M, Haque MM, Kudrat-E-Khuda MI. Early complications of suture closure of perforated duodenal ulcer: A study of 100 cases. Teach Assoc J 2005;18(2):122-6.
7. Aman Z, Naeem M, Khan RM, Ahmad T, Alam M, Noreen S, et al. Pattern of change in the frequency of Helicobacter pylori with perforated duodenal ulcer . J Ayub Med Coll Abbottabad Oct-Dec 2008;20(4):41-3.