



## CLINICAL STUDY OF PERFORATED PEPTIC ULCER DISEASE

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### Abstract:

Peptic ulcer disease is a common surgical problems faces by surgeons overall. For surgeons it is imperative to be familiar to this disease and able to treat. Peptic ulcer is a disease that refers to ulcers in the lining of the stomach or painful sores or part of small intestine called duodenum. Peptic ulcer is also known as stomach ulcer that breaks the lining of small intestine of the stomach or occasionally the lower esophagus. The epidemiology of peptic ulcer disease reflex multifunctional etiologies and life style. Peptic ulcer disease is more affected by environment factors and habits such as consuming alcohol and smoking in addition to using NSAID drugs.

**Methods and Materials:** All patients are informed consents. Total 50 patients having peptic ulcer disease were taken in this study attending to hospital. From all the patients complete clinical history was collected with performing physical examination. All patients' data with the operative and discharge record were correlated with the case notes wherever necessary.

**Result:** Total 50 patients were including in this study. Peptic ulcer was classified as Gastric ulcer and Duodenal Ulcer. Age group was 30-40 years and above. Almost in all age group ulcers were present. Epigastrium is the majorly site to observed ulcer pain. Hunger and burning is the commonest type of pain whereas all the patients that consumption of alcohol and smoking are suffering from ulcers. History of lone term consumption of NSAID's and steroids are also one of the factors for ulcers.

**Conclusion:** Peptic disease is a common problem presenting to the surgeon in diagnosis and treatment. Duodenal ulcers are more common than gastric ulcer. Due to the environmental and behavioural habitats that include smoking, drinking and stress causes complications of ulcers with the presentation of contrary scenario of India remains unaltered with patients with high mortality and morbidity.

**Key words:** Peptic ulcer, lifestyle, duodenal ulcer, Gastric ulcer

### Introduction:

The technique of arterial anastomosis was developed by Alexis Carrel and won Noble Prize. In his book entitled "Man the Unknown," he wrote that despite the remarkable progress in science, little is known about human beings because the mentality of man is not designed to know him, because his ancestors were too busy, and because he is too complicated. This is fundamental discrepancy. We must know the fact

among all sciences the most difficult is "human science".

Peptic ulcer is a disease that refers to ulcers in the lining of the stomach or painful sores or part of small intestine called duodenum. Peptic ulcer is also known as stomach ulcer that break the lining of small intestine of the stomach or occasionally the lower esophagus<sup>i,ii</sup>. An ulcer in first part of intestine is called as duodenal ulcer which is also known as gastric ulcer in stomach. The common symptoms are upper abdominal pain with walking at night that improves with

eating often known as burning or dull ache. Other symptoms were vomiting, belching, poor appetite and weight loss. People have no symptoms about a third age<sup>1</sup>. There are complications that may include perforation, bleeding and blockage of the stomach. About 15% of people may occur bleeding<sup>iii</sup>.

A linear model in which important for clarification of effect-cause sequence of ulcer to be an infectious disease rather than a stress related disease. There is much evidence that eradication of H. pylori prevents the recurrence of peptic ulcer and believed that about 70%-80% of aged 40 years and above people are infected with H. pylori. However ulcer will develop for only few percent. A psychosocial factor that associated between stress and peptic ulcer has demonstrated a strong stress association with development and recurrence of ulcer disease<sup>iv</sup>. However only 30-60% of people have ulcers are related to stress. The organs that are affected to interaction of stress with individual predisposition and many other risk factors consequently cause a peptic ulcer which is a multifactorial disease<sup>v</sup>. Approximately 7-10 cases of peptic ulcer per one lakhs population per year. About 7% of patients were hospitalized for peptic ulcer disease. About 2% of patients with duodenal ulcer are the first clinical features of the disease. Gastric ulcer is a serious life threatening condition so it has to detect early and treated for survive. Usually patients with peptic ulcer have sign and

symptoms of peritonitis followed by septicemia. In postoperatively, about 20-50% can have high morbidity and 3-40% mortality. Prevalence of peptic ulcer has been decrease worldwide considerably with potent antiulcer medicines, but the complications of peptic ulcer like perforation has not similarly decrease<sup>vi</sup>. This study was done to understand the distribution of peptic ulcer.

**Material and Methods:**

The study was conducted in the Dept. of Surgery at K.D.Medical College Hospital and Research Center Mathura. All patients are informed consents. Total 50 patients having peptic ulcer disease were taken in this study attending to hospital as in patient department (IPD) and outpatient department (OPD) of our hospital. The patients with age group 20-70 years were included in this study. From all the patients complete clinical history was collected and also physical examinations were done. All patients' data with the operative and discharge record were correlated with the case notes wherever necessary. To search for subsequent findings endoscopy reporting system was used.

**Result:**

In this study total 50 patients were include in which the data were given below. In this study, peptic ulcer was classified as Gastric ulcer and Duodenal Ulcer. Total patients were also classified with their age group which was described by the given table below.

**Table 1: Peptic ulcer classified according to age group with ulcer type.**

Age	Gastric ulcer	Duodenal ulcer
20-30	3	4
30-40	5	13
40-50	1	5
50-60	2	7
60-70	4	6
<b>Total</b>	15	35

The chi-square statistic is 1.8367. The p-value is .765755. The result is not significant at  $p < .05$ . According to the given table no.1 it was clear that more prone age group was 30-40 years and above. Almost in all age group ulcers were present. After the age of 30 years peptic ulcer was common and average of the patients were 36 years.

**Table 2: Showing the site for ulcers.**

Site	Gastric ulcer	Duodenal ulcer
<b>Epigastrium</b>	4	14
<b>Rt. Hypochondrium</b>	1	6
<b>Epigastrium &amp; Rt. Hypochondrium</b>	1	15
<b>Epigastrium &amp; Umbilicus</b>	2	4
<b>Umbilicus &amp; Rt. Hypochondrium</b>	1	2
<b>Umbilicus &amp; Lt. Hypochondrium</b>	0	0
<b>Total</b>	9	41

The chi-square statistic is 3.213. The p-value is .522826. The result is not significant at  $p < .05$ . From total patients in this study, 15 patients shows Epigastrium & Rt. Hypochondrium and 14 patients shows Epigastrium as main site of pain for peptic ulcer. There are similarities in ulcer with the site Epigastrium & Rt. Hypochondrium for duodenal ulcer where as Epigastrium site shows more in gastric ulcer. However there is no pain for the site Umbilicus & Lt. Hypochondrium as shown in table 2. Out of total patients, there was more patients with the common type of pain observed in peptic ulcer. Total 21 and 5 patients out of 50 patients have common type of pain with hunger in peptic ulcer. As shown in table 3.

**Table 3: Showing the type of pain.**

Complains	Gastric ulcer	Duodenal ulcer
<b>Burning</b>	3	5
<b>Hunger and Burning</b>	5	21
<b>Hunger</b>	4	7
<b>Discomfort</b>	1	4
<b>Total</b>	13	37

The chi-square statistic is 1.8767. The p-value is .59838. The result is not significant at  $p < .05$ .

**Table 4: Showing the patients consuming Alcohol & Smoking**

Habits	Gastric ulcer	Duodenal ulcer
<b>Smoking</b>	4	8
<b>Alcohol</b>	3	10
<b>Both</b>	5	15
<b>None</b>	1	4
<b>Total</b>	13	37

The chi-square statistic is 0.4971. The p-value is .919529. The result is not significant at  $p < .05$ . From the above table no 4. It shows that all the patients were suffering from peptic ulcer were consuming alcohol as well as smoking. Almost least or equivalent to none patients were suffering from ulcer that without consuming whether alcohol or smoking or both.

**Table 5: Showing patients with the history of drug used.**

Drugs	Gastric ulcer	Duodenal ulcer
NSAID's	3	20
Steroids	2	7
<b>Total</b>	5	27

The chi-square statistic is 0.4134. The p-value is .520257. The result is not significant at  $p < .05$ . On the past regular consumption of NASID's & Steroids is the factor for the peptic ulcers. From the above table shows that long time consuming the NASID's drugs will be one the cause for the peptic ulcer where as Steroids shows less effect than NASID's used by patients.

### Discussion

The peptic ulcers are the commonest problem that emerging in coming days. In this study as compared to the duodenal ulcers gastric ulcer in far more was observed. Peptic ulcer followed by pyloric stenosis and hemorrhage was the commonest chief complains. Hemorrhages may be managed by conservatively whereas the first line of treatment is surgical intervention for pyloric stenosis and perforation. However this incidence of surgical treatment of peptic ulcer decrease the incident but it is not yet justified<sup>vii</sup>, <sup>viii</sup> and <sup>ix</sup>. In our study in the age of 30-40 years group was the highest perforation of peptic ulcer in which age of 30years and age of 55 years were highest. As compared to the sex group this study found males were more affected with ulcer than females which were similar to the study conducted by Chalya and Mabula et al<sup>x</sup>. However there was no significant incidence of gastric ulcer to the patients regarding to sex. This variance in sex may be due to geographical locations and probably with environmental and habit factors as well as diet also play the role for this. As the study conducted by Tovey et al<sup>xi</sup> and Ramesh Bharti et al<sup>xii</sup> also shows the wide variation in sex for the peptic ulcer. This wide variation may be due to environmental and other factors.

As the physical examination of the patients uncomplicated so peptic ulcer is normal. In some patients there is presence of tenderness in epigastrium which is not so much specific for ulcer as it can be seen in other conditions which is almost to the study conducted by Andre h. Soll et al<sup>xiii</sup>, Edward et al<sup>xiv</sup> and Horrocks et al<sup>xv</sup>.

As in the study of Edwards et al<sup>14</sup>, patients with the habit of smoking were more possible for the ulcer disease which is similar to our study in addition to the consumption of the alcohol were

most high risk group for the ulcer disease. As the study conducted by Avijeet et al<sup>xvi</sup>; patients using long time NSAID'S drugs has highest prevalence of peptic ulcer which was quite similar to our study.

### Conclusion

Peptic disease is a common problem presenting to the surgeon in diagnosis and treatment. Duodenal ulcers are more common than gastric ulcer. Males are more commonly affected in comparison to females in ulcers. This may be due to the environmental and behavioral habitats. Long term follow up data would be useful for the patients to cross check up with subsequently developed the complications of the ulcers. Bacterial eradication and administration of drugs for the treatments of ulcer are analogous to management.

Conventional medical treatment like unhealthy lifestyle that includes smoking, drinking and stress are not useful for ulcers and it can further cause the complications of ulcers. Although there was introduction of proton pump inhibitors for treatment of peptic ulcer disease, complications with the presentation of the ulcers in the contrary scenario of India remains unaltered with patients with high mortality and morbidity.

### References

1. Najm, WI (September 2011). "Peptic ulcer disease." *Primary care* 38 (3): 383–94, vii. doi:10.1016/j.pop.2011.05.001. PMID 21872087.
2. Definition and Facts for Peptic Ulcer Disease". <http://www.niddk.nih.gov/>. Retrieved 28 February 2015.
3. Milosavljevic, T; Kostić-Milosavljević, M; Jovanović, I; Krstić, M (2011). "Complications of peptic ulcer disease." *Digestive diseases (Basel, Switzerland)* 29 (5): 491–3. doi:10.1159/000331517.
4. Weiner, H.: From simplicity to complexity (1950–1990): The case of peptic ulceration— I. Human studies.—II. Animal studies. *Psychosom Med* 1990; 53: 467–516.
5. Levensten, S.: The very model of a modern etiology: A biopsychosocial view of peptic ulcer. *Psychosom Med* 2000; 62: 176–185.

6. Bijit Gogoi PERFORATED PEPTIC ULCER: A CLINICAL ANALYSIS AND OUTCOME: J. Evolution Med. Dent. Sci./ eISSN- 2278-4802, pISSN- 2278-4748/ Vol. 5/ Issue 22/ Mar. 17, 2016
7. Carter R, Anderson JR; randomized trial of adrenaline injection and laser photocoagulation in the control of hemorrhage fro peptic ulcer British Journal of Surgery, 1994;81: 869 -871.
8. Kim BJ, Connell OT; Gastroduodenostomy after Gastric Resection for Cancer. American Surgery; 1999; 65:: 905-907
9. Dandapat MC, Mukherjee LM, Mishra SB, Howlader C; Gastrointestinal perforations – a review of 340 cases. Indian J. of Surg, 1991; 53(5):189 -193
10. Phillip L Chalya, Joseph B Mabula, Mheta Koy, et al. Clinical profile and outcome of surgical treatment of perforated peptic ulcers in northwestern Tanzania: a tertiary hospital experience. World J Emerg Surg 2011;6:31.
11. "Tovey, F. I. (1975). Peptic ulcer. In Refined Carbohydrate Foods and Disease, pp. 279-309. Edited by D. P. Burkitt and H. C. Trowell. Academic Press: London.
12. Ramesh C. Bharti et al: Immediate definitive surgery in perforated duodenal ulcer: A comparative study between definitive surgery and simple closure, Indian Journal of Surgery. 1996; 58(10):275-9.
13. Gilbert H; Andrew – Peptic Ulcer Disease Goldman: Cecil Textbook of Medicine 22nd Ed. 2004 Chapter 138
14. Edwards, F., McKeown, T., and Whitfield, A. G. W. (1959). Association between smoking and disease in men over sixty. Lancet, 1, 196-200.
15. Observer Variation In Assessment Of Results Of Surgery For Peptic Ulceration The British Medical Journal. Vol. 1, No. 6013 (Apr. 3, 1976), pp. 814-816
16. Dr. Avijeet Mukherjee<sup>1</sup>, Dr. Naveen. N<sup>2</sup>. A Clinical Study of Peptic Ulcer Disease and its Complications in Rural Population. Sch. J. App. Med. Sci., 2014; 2(4E):1484-1490.