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A prospective study on surgical complication of peptic ulcer disease in tertiary care hospital

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Abstract---Introduction: Peptic ulcer disease indicates both gastric and duodenal ulcers. This ulcer is a major threat worldwide over the past two centuries with a high morbidity and mortality. Some epidemiological studies concluded that there is strongly association between H. Pylori infection and peptic ulcer. There is also some studies suggested that there is a complications that is seen after post operative peptic ulcer. Objective: To study the postoperative complication in peptic ulcer disease patients in tertiary care hospital. Material: A prospective study conducted on 180 post operative peptic ulcer patients. This study was conducted in Department of Surgery, ASJSATDS Medical College, Fatehpur. This study was carried out after taking approval from Institute Ethics Committee and informed consent from patient. Results: The present study was carried out on 180 post operative peptic ulcer patients, among them majority of the patients were males 116 (64.44%), age group under 41 to 50 years. As per the occupation, majority of the patients were employed 112 (62.22%) followed by studying 48 (26.66%) Total of 54 patients having ulcers in stomach as such 32 (59.25%) having multiple ulceration. There are two groups of drugs taken i.e NSAIDs & Opioid analgesic.152 (84.44%) patients were not taken any drug and 28 (15.55%) were taken NSAIDs & opioid drugs. As per the comorbidities, 34 (18.88%) patients did not have any co-morbidity and 146 (81.11%) having co-morbidity As per the sign of complication in post operative peptic ulcer, 69 patients having no complication and 111 (61.66%) patients having complication in post operative patients. Conclusion:

Mostly peptic ulcer is seen in patients taking NSAIDs. In diabetic patients, symptoms like epigastric pain and post operative complication like infection at surgical site is mostly seen.

Keywords---peptic ulcer, surgical complications, prospective study.

Introduction

Peptic ulcer is a disease of gastric and duodenal ulcer. They are having three main complications such as hemorrhage, perforation or obstruction [1]. These complications may develop without any symptoms. There are some etiopathogenesis of peptic ulcer disease has changed from acid related disease to infectious disease [2]. Some studies discovered that Helicobacter pylorus plays a important role in causing peptic ulcer. The main important task is to treat peptic ulcer but there are some drugs that induces peptic ulcer such as NSAIDs, low dose aspirin, smoking, excessive alcohol usage, emotional stress, such drugs cause peptic ulcer and there complications [2]. There are different factors that produce diseases depending upon the histological changes, gastritis induced changes in homeostasis of gastric hormones and acid secretion, gastric metaplasia in duodenum, immunopathogenesis, ulcerogenic strains and genetic factors [2]. Currently, up to 90% of all ulcer operations are interventions for complications, including hemorrhage, perforation and gastric outlet obstruction. [3]. There is average of 2 – 10% patients suffers with peptic ulcer complications [4-5] mortality rate of 10%. For the treatment of peptic ulcer disease, proton pump inhibitors H2 receptors antagonists, chemotherapy drugs for H.Pylori disease [2].

Material & Methods

Study Population

This study was carried out in the Department of Surgery, ASJSATDS Medical College, Fatehpur. A total of 180 postoperative peptic ulcer patient and patients ready to give inform consent form were included in the study. This study was carried out after taking approval from Institute Ethics Committee.

Inclusion criteria

1. Patients under age group 30 to 70 years
2. Patients with both the sexes
3. Patients ready to give inform consent form.

Exclusion criteria

1. Patients age more than 70 years.
2. Patients not ready to give inform consent form.
3. Patients with ulcer and with other tumors in stomach.

Methodology

180 Post operative peptic ulcer patients there inform consent form was taken. Information about their past illness, employment status, history of NSAIDS & Steroids, co-morbidity, sign & symptoms and complications post operative surgery.

Statistical analysis

The qualitative data were expressed in proportion and percentages and the quantitative data expressed as mean and standard deviations. Significance levels for tests were determined as 95% ($P < 0.05$).

Results

The present study was a prospective study conducted in department of surgery on 180 post operative peptic ulcer patients.

Table No: 01 Tabular column represents the gender of peptic ulcer disease patients

| Gender | No of patients with peptic ulcer | Percentage of patients with peptic ulcer |
|--------|----------------------------------|--|
| Male | 116 | 64.44% |
| Female | 64 | 35.55% |
| Total | 180 | 100.00% |

Figure No: 01 Graphical representation of gender of peptic ulcer disease

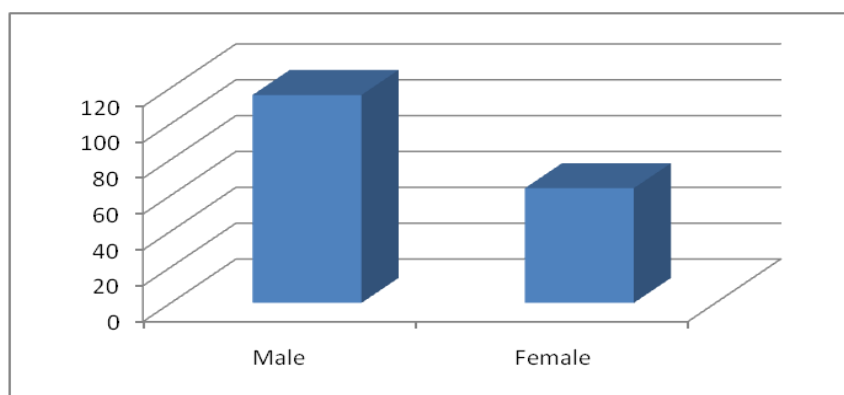


Table No 02: Tabular column represents the age wise distribution of peptic ulcer patients

| Age | No of patients with peptic ulcer | Percentage of patients with peptic ulcer |
|----------|----------------------------------|--|
| 30 to 40 | 58 | 32.22% |
| 41 to 50 | 76 | 42.22% |

| | | |
|--------------------------|-----|---------|
| 51 to 60 | 30 | 16.66% |
| 61 to 70 | 16 | 08.88% |
| Total number of patients | 180 | 100.00% |

Figure No 02: Graphical represents the age wise distribution of peptic ulcer patients

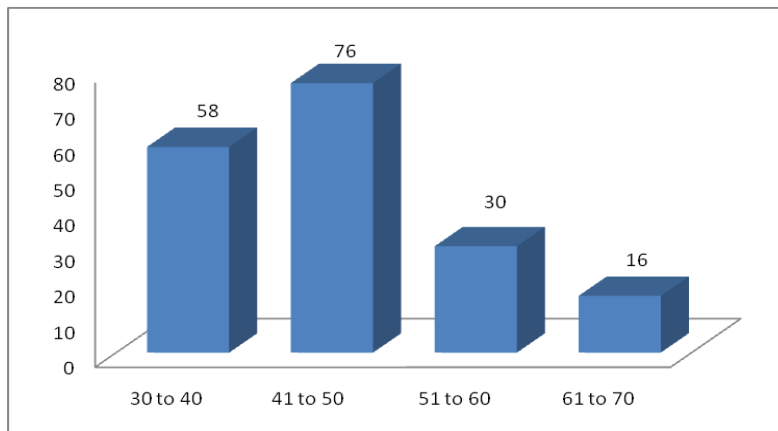


Table No: 03 Tabular columns represent the occupation in peptic ulcer disease patients

| Occupation | No of patients with peptic ulcer | Percentage of patients with peptic ulcer |
|--------------------------|----------------------------------|--|
| Studying | 48 | 26.66% |
| Unemployed | 20 | 11.11% |
| Employed | 112 | 62.22% |
| Total number of patients | 180 | 100.00% |

Figure No 03: Graphical representation of employment status of peptic ulcer disease patients

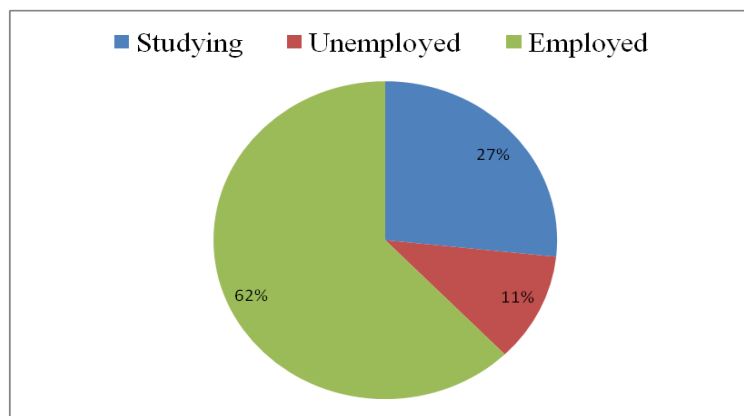


Table No 04: Tabular column represents damage ulcers in stomach

| Ulcer's in stomach | No of patients with peptic ulcer | Percentage of patients with peptic ulcer |
|--------------------------|----------------------------------|--|
| Multiple ulcers | 32 | 59.25% |
| Gastric obstruction | 18 | 33.33% |
| Bleeding | 04 | 07.40% |
| Total number of patients | 54 | 100.00% |

Figure No 04: Graphical representation damage ulcers in stomach

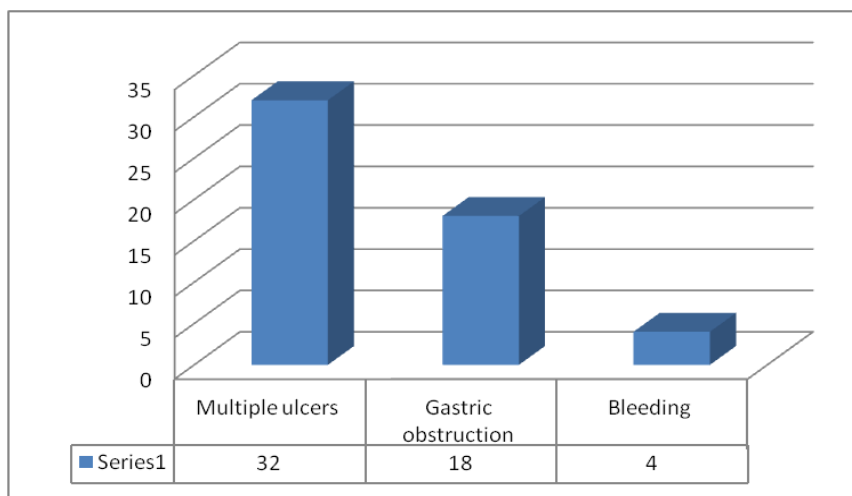


Table No 05: Tabular column represents number of patients taken drugs to cause peptic ulcer

| Drugs taken | No of patients with peptic ulcer | Percentage of patients with peptic ulcer |
|-------------------------------------|----------------------------------|--|
| No of patients not taken any drugs. | 152 | 84.44% |
| No of patients taken drugs | 28 | 15.55% |

Figure No 05: Graphical representation of number of patients taken NSAIDs & Steroids

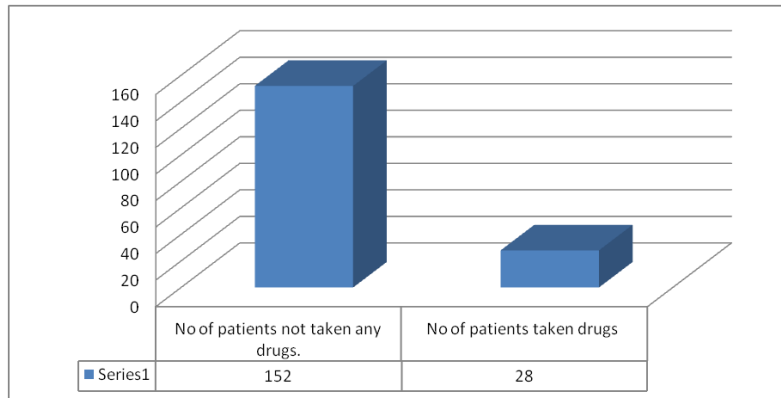


Table No 06: Tabular column represents history of NSAIDs and Steroids usage

| Drugs taken | No of patients with peptic ulcer | Percentage of patients with peptic ulcer |
|--------------------------------|----------------------------------|--|
| No of patients taken NSAIDs. | 18 | 10.00% |
| No of patients taken Steroids. | 08 | 04.44% |

Figure No 06: Graphical representation of patients taken NSAIDs & Opioids

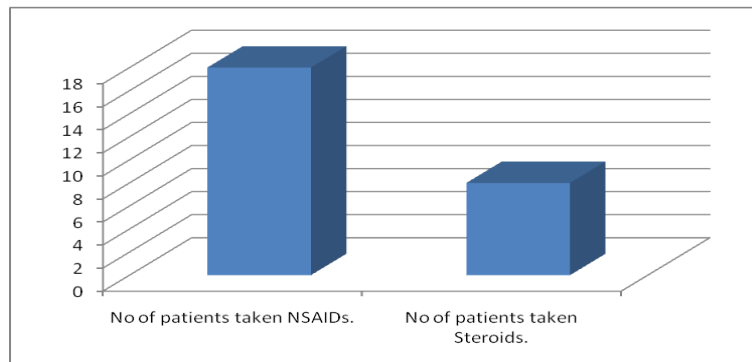


Table No 07: Tabular column represents co-morbidity in peptic ulcer patients

| Co-morbidity | No of patients with peptic ulcer | Percentage of patients with peptic ulcer |
|-------------------|----------------------------------|--|
| No co-morbidity | 34 | 18.88% |
| Diabetes Mellitus | 56 | 42.22% |
| Hypertension | 38 | 26.66% |
| Skin Infection | 29 | 16.11% |
| Liver disease | 07 | 06.11% |

| | | |
|--|-----|---------|
| Kidney disease | 16 | .08.88% |
| Total number of patients having co-morbidity | 146 | 81.11% |

Figure No 07: Graphical representation of co-morbidity in peptic ulcer patients

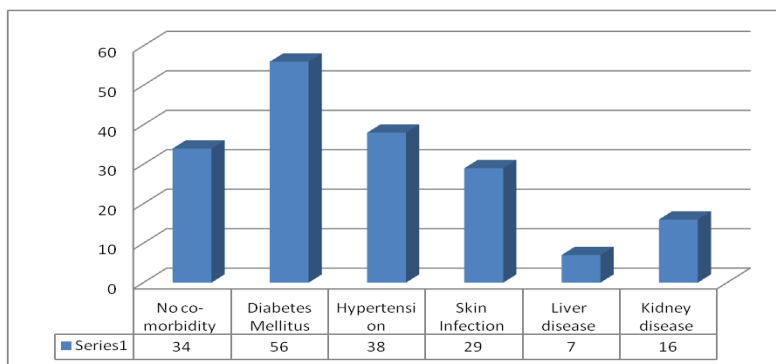


Table No 08: Tabular column represents sign and symptoms in peptic ulcer patients

| Sign and Symptoms | No of patients with peptic ulcer | Percentage of patients with peptic ulcer |
|-----------------------|----------------------------------|--|
| Epigastric pain | 168 | 93.33% |
| Vomiting | 96 | 53.33% |
| Constipation | 48 | 26.66% |
| Abdominal destruction | 79 | 48.88% |
| Gastritis | 138 | 76.66% |
| Shock | 84 | 46.66% |
| Fever | 44 | 24.44% |

Figure No 08: Graphical representation of sign and symptoms in peptic ulcer patients

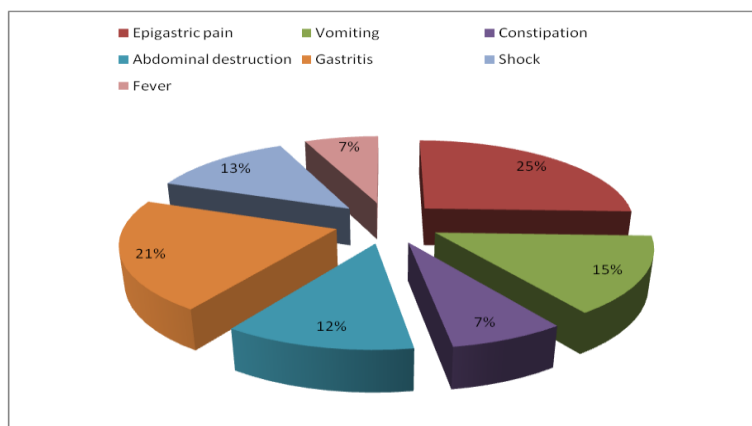


Table No 09: Tabular column represents the complication and non – complications in post-operative condition

| | |
|---|-----|
| No complications in post operative patients | 69 |
| Complications in post operative patients | 111 |

Figure No: 09 Graphical representations of complication and non-complication in post operative condition

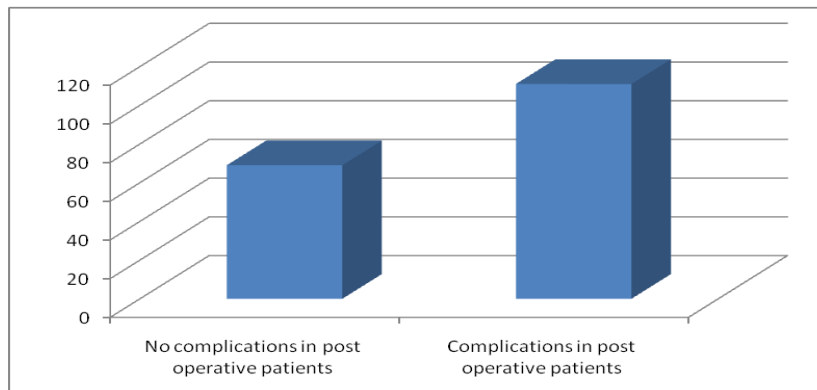
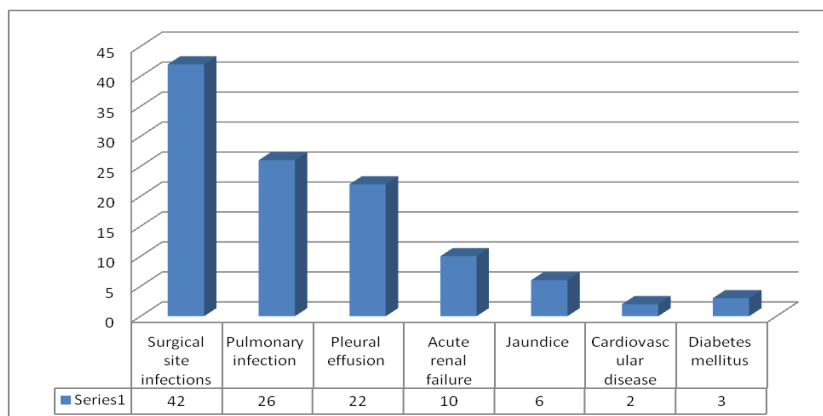


Table No 10: Tabular column represents the complications post operative complication in peptic ulcer patients

| Post-operative complication | No of patients with post-operative complications | Percentage of patients with post-operative complications |
|--|--|--|
| No complications | 69 | 38.33% |
| Surgical site infections | 42 | 23.33% |
| Pulmonary infection | 26 | 14.44% |
| Pleural effusion | 22 | 12.22% |
| Acute renal failure | 10 | 05.55% |
| Jaundice | 06 | 03.33% |
| Cardiovascular disease | 02 | 01.11% |
| Diabetes mellitus | 03 | 01.66% |
| Total Number of patients having post-operative complications | 111 | 61.66% |
| Total Number of patients with and without complications | 180 | 100.00% |

Figure No 10: Graphical representation of post operative complication in peptic ulcer patients



Discussion

The present study was carried out on 180 post operative peptic ulcer patients among them 116 male (64.44%) and 64 females (35.55%). Our study coincides with the study of Mathur PN et al (2017) [6] in his study he observed that male patients are more than that of female patients. Age group between 30 to 70 patients were in the study the majority of the age group were under 41 to 50 years 76 (42.22%) followed by 30 to 40 years 58 years (32.22%), 51 to 60 years 30 (16.66%) and 61 to 70 years (08.88%). Our study coincides with the study of Mathur PN et al (2017) [6] in this study he observed that age group between 31 – 50 years are more prone for peptic ulcer complications. As per the occupation, majority of the patients were employed 112 (62.22%) followed by studying 48 (26.66%) and unemployed 20 (11.11%). Kotha A et al (2020) [7] Total of 54 patients having ulcers in stomach as such 32 (59.25%) having Multiple ulceration followed by gastric obstruction 18 (33.33%) and bleeding 04 (07.40%). There are two groups of drugs taken i.e NSAIDs & Opioid analgesic 152 (84.44%) patients were not taken any drug and 28 (15.55%) were taken NSAIDs & opioid drugs. Among 28 patients, 18 (10.00%) patients were taken NSAIDs and 08 (04.44%) patients were taken opioid analgesics. As per the comorbidities, 34 (18.88%) patients did not have any co-morbidity and 146 (81.11%) having co-morbidity among them 146 co-morbidity patients 56 (42.22%) having diabetes followed by 38(26.66%) hypertension, 29 (06.11%) skin infections, 07 (06.11%), kidney disease 16 (08.88%) Mathur PN et al (2017) [6]. As per the sign & symptoms of peptic ulcer, majority of the patients having epigastric pain 168 (93.33%) followed by gastritis 138 (76.66%), vomiting 96 (53.33%), shock 84 (46.66%), abdominal destruction 79 (48.88%), constipation 48 (26.66%) and fever 44 (24.44%). As per the sign of complication in post operative peptic ulcer, 69 patients having no complication and 111 (61.66%) patients having complication in post operative patients, among 111 (61.66%) 42 (23.33%) patients having surgical site infection followed by 26 (14.44%) pulmonary infection, 22 (12.22%) pleural effusion, 10 (05.55%) acute renal failure, 06 (03.33%) jaundice, 02 (01.11%) and 03 diabetes mellitus (01.66%).

Conclusion

Peptic ulcer is frequent surgical emergency and requires awareness and management. As per this study mostly affective in young and middle aged males. Mostly peptic ulcer is seen in patients taking NSAIDs. In diabetic patients, symptoms like epigastric pain and post operative complication like infection at surgical site is mostly seen.

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