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### RESEARCH ARTICLE

#### PEPTIC ULCER PERFORATION-INCIDENCE IN YOUNG PATIENTS IN WESTERN RAJASTHAN.

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##### Key words:-

Young, Peptic ulcer perforation.

#### Abstract

Background-Peritonitis due to peptic ulcer perforation is one of the common causes of gastrointestinal tract perforation. Recently a trend has been observed towards a shift from older to younger population. In this study recent incidence of peptic perforation was carried out with below mentioned statistics.

Method-It is a prospective study design of patients admitted in emergency and diagnosed as having peptic perforation either gastric or duodenal intra-operatively in age group of 15-35 year from August 2014-August 2015.

Results- Out of the total 135 patients 50 were in the age group of 15-35 years. 80% of the young patients were males with male: female ratio being 4:1. 30% of the patients had previous history of peptic ulcer disease. Anterior duodenal perforation was the most common finding noted in about 90% of patients. Common etiological factors were H.pylori, NSAID use along with stress and alcoholism. Mortality rate due to peptic ulcer perforation was about 2% which was quite less as compared to older population due to good physiological reserves.

Conclusion-Peptic ulcer perforation is more common in younger age group with male preponderance.

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#### Introduction:-

Peptic ulcer perforation is one of the most common surgical emergencies encountered by surgeons. It has got the highest mortality of any complication approaching 15%<sup>(1)</sup>. Timely resuscitation and proper surgical management if morbidity and mortality have to be reduced<sup>(8)</sup>.

It has been observed that incidence of peptic perforation has been increased in young adults which can be attributed to various conditions like –association with *Helicobacter pylori*, increased use of NSAIDs, increased smoking and alcoholism and stress related to work in competitive work.

Considering the need of time, a prospective study of peptic ulcer perforation to determine incidence in young adults in Western Rajasthan was carried out on patients admitted in different surgical wards of hospitals attached with Dr S N Medical College, Jodhpur from August 2014 to August 2015.

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**Methods:-****Inclusion criteria:-**

Cases admitted in emergency basis and diagnosed as having peptic ulcer perforation either as gastric and duodenal perforation in were included.

**Diagnostic criteria:-**

Presence of free gas under diaphragm and confirmed as having gastric or duodenal perforation on exploration was the criteria used to denote those having peptic ulcer perforation.

**Exclusion criteria:-**

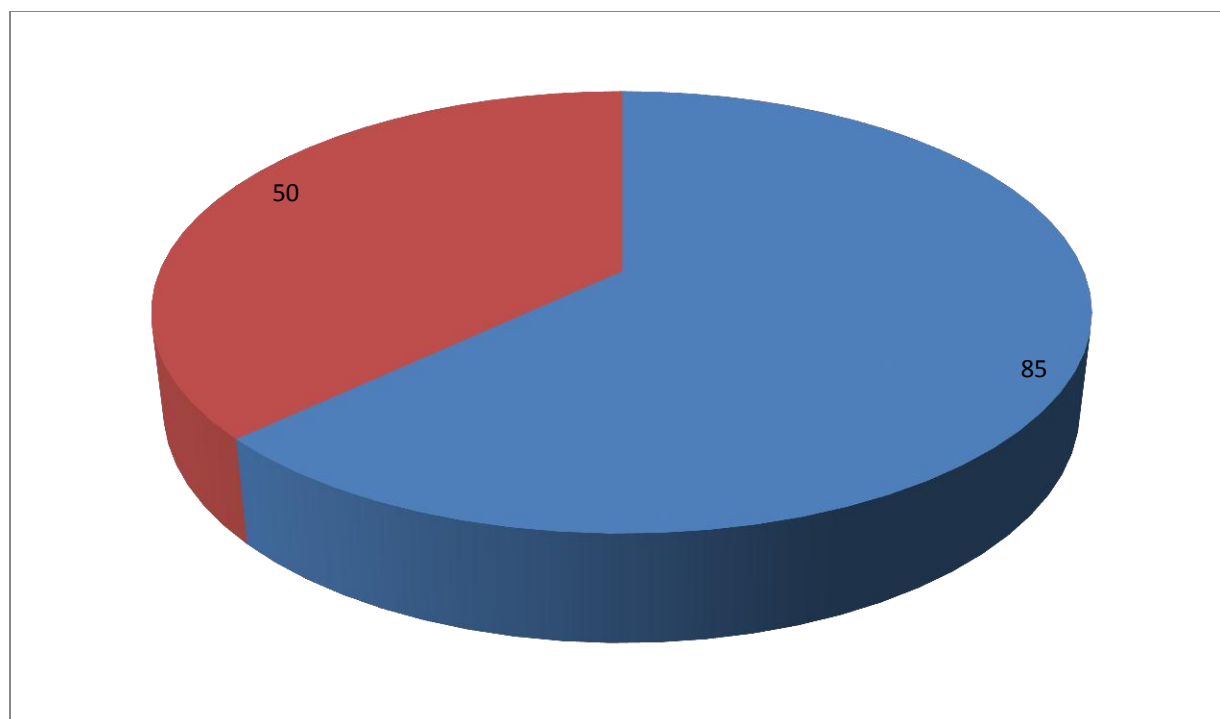
Following patients were excluded from the study

- a. Patients with age <15 and >35 years
- b. Patients having traumatic perforation involving jejunum or ileum.
- c. Appendicular and large bowel perforation.
- d. Histologically proven cases of malignant gastric ulcer perforation.
- e. Patients with gastro-jejunal stomal perforations
- f. Pregnant females.

After resuscitation and exploration under general anesthesia was done and intra-operative findings were noted. Peritoneal contamination along with size and site of perforation noted. None of cases were not giant perforation hence, simple closure with omentoplasty and peritoneal lavage with copious normal saline was done. Abdominal drains were kept as per requirements. Post-operatively patients were kept nil by mouth till return of bowel activity. They were given iv fluids, injectable antibiotics and iv Pantoprazole 40 mg once a day. They were assessed for post-operative complications like-wound infections, fever, leak from perforation and any other co-morbidities. Mortality criteria was defined as death during hospitalization. All patients were given H.pylori eradication therapy (triple therapy) regimen. Patients were followed up for 2 weeks after discharge.

**Results:-**

Out of the total 135 patients admitted with diagnosis of peptic ulcer perforation 50(37%) were in the age group of 15- 35 years. Amongst those in younger age group, 40(80%) were males and 10(20%) were females. Ratio of male and female patients in younger age group was 4:1 having peptic ulcer perforation. About 15(30%) patients had previous history of suggestive of peptic ulcer disease or had taken H2 blockers or proton pump inhibitors. Remaining 35(70%) patients had no



**Proportion Of Young Patients As Compared To Old Having**

Peptic Perforation history suggestive of peptic ulcer disease. 60% of young patients were alcoholic & 10(20%) had history of NSAID use.

Intra-operative findings revealed that 88% of the patients had anterior duodenal perforation and 12% had anterior wall gastric perforations. Amongst these 43(86%) had perforations sized <1 cm and remaining 14% had perforations sized > 1cm. Hence, the ratio of duodenal and gastric perforation in younger age group was 7.3:1. During post-operative period 14(28%) developed fever, 12(24%) developed wound infection. Mortality was observed in 1(2%) patient. Of those 49 alive and discharged, 31(63.3%) came for regular follow up and 18(36.7%) didn't come for follow up. Only 2(6.4%) of those who came for follow up had mild persistent symptoms relieved by proton pump inhibitors and rest all were asymptomatic.

Post-operative complications	Number of patients having complications	Percentage
Fever	14	28
Wound infection	12	24
Residual abscess	1	2
Burst abdomen	1	2

### Discussion:-

Incidence of peptic ulcer perforation is rising in younger population as is indicated by similar study conducted by Bharti et al in 1996, which showed maximum incidence approaching 48%. Most common age group involved was 31-35 yr as is concordant with our study<sup>(2)</sup>. Similar study conducted by Hannan et al in 2005 revealed that incidence of peptic perforation was highest in younger age-group of 30-40 yr which approaches 34%. This is similar to our study<sup>(3)</sup>. In study conducted by Elnagib et al 2008 it was reported that incidence of peptic ulcer perforation is maximum in young adults between 20-30 years of age which approaches about 38%. Etiological factors in study commonly associated were stress and alcoholism responsible for 43% patients in this study<sup>(4)</sup>. Chailya et al conducted study recently in 2011 and reported incidence of peptic ulcer perforation to be about 41% in age-group of 21-30 years, which is also similar to our findings<sup>(5)</sup>. Duodenal ulcer is the most common in our study with 90% incidence as is the finding of study by Belne K et al<sup>(6)</sup>. Mortality rate in this age-group is around 2% which is again similar to that found in data in sample study of Administrative data source<sup>(7)</sup>.

**Conclusion:-**

Peptic ulcer perforation is a disease more common in young population with male preponderance. Most of them do not have antecedent history of peptic ulcer disease. Common predisposing factors include alcoholism, NSAIDs use and work related stress although H.pylori has been established as major predisposing factor worldwide. Anterior duodenal wall is the most common site of perforation. Most of them are small in size. Simple closure and live omentoplasty serves as effective procedure in emergency. Morbidity and mortality has been less as compared to older population due to good physiological reserve. Post-operatively anti-H.pylori therapy is given and follow-up is essential to detect recurrence and evaluation.

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