

Epidemiology of Peptic Ulcer Disease in Rural Haryana: Retrospective Data Analysis of Last Ten Years – 800 Cases

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ABSTRACT

Background: Perforation peritonitis is one of the commonest emergencies encountered by surgeons. The aim of this paper is to provide an overview of the spectrum of perforation peritonitis and correlates of peptic perforation managed in Maharaja Agrasen Medical College, Agroha, Hisar, Haryana, which mainly caters to the rural population of Haryana, particularly Hisar and nearby districts. In the late eighteenth century, various aspects of the clinical presentations of gastric and duodenal ulcers began to be recognized and knowledge of clinico-pathological presentation and treatment added up thereafter regarding this particular disease, medical research in the laboratory and the hospital became well established as the main driver for the introduction of new treatments and investigations.

Material and methods: The present retrospective study was carried out on 800 patients who were operated for peptic perforation in last 10 years. The comparison was carried out in terms of age, sex, site of perforation, Histopathological reports.

Results: Pre-pyloric perforation was found in 498 patients (62.25%). Duodenal perforation was found in 302 patients (37.75%).

Conclusions: Patient characteristics, such as sex, age, smoking, alcohol consumption, diet, access to quacks indicate a higher Pre-pyloric perforation rate in rural Haryana.

Keywords: Dyspepsia, quacks, smoking, alcoholism, peptic perforation.

3. Acute Gastritis or Acute gastric Catarrh

4. Chronic Gastritis or Obstinate Chronic Dyspepsia

Dyspepsia may be an early symptom of a serious illness, such as peptic ulceration, cholelithiasis or gastric carcinoma, but often no organic cause is found. Nearly half the gastroenterological workload involves the management of patients in whom no organic lesion can be identified: many have dyspepsia. The majority are treated in General Practice. No agreement has yet been reached on the definition, classification or management of dyspepsia. Even the term 'dyspepsia' is not universally understood. dyspepsia defies definition.⁵ Symptoms of dyspepsia or indigestion have affected more than twenty percent of general population in developing countries and has attracted the involvement of many medical practitioners and others with the provision of health care. Within this group of symptomatic dyspeptic patients were to be found gastric and duodenal ulcers which were capable of causing serious health problems. However the prevalence of stomach and duodenal peptic ulcers has declined markedly during the time course, peptic ulcers may still have a fatal outcome, they now are considered to be curable conditions for the majority of patients who suffer from them in the developing countries. Although ulcers may be found in the oesophagus, the stomach and the duodenum, this study is concerned only with the gastric (or stomach) and duodenal ulcers. When discussing these collectively, the term 'peptic ulcers' shall be used.

The word 'peptic' is derived from the Greek 'peptein' which means 'to digest' and there is an implication by its conjunction with 'ulcer disease' that the digestive processes themselves play a part in the formation of an ulcer. Gastrointestinal perforations constitute one of the commonest surgical

INTRODUCTION

Perhaps the earliest example of death caused by a gastric ulcer was found in the 1984 post-mortem report of the exhumed body of a Chinese man who died in 167 BC.¹ A contemporary physician, Robert Squirrell, described the symptoms of indigestion as follows; 'Diminution or total loss of appetite, sometimes vomiting, especially in the morning, bad taste in the mouth, foul tongue, distension, and pain in the stomach and bowels, particularly after meals, eructations, etc.'² By the nineteenth century, 'dyspepsia' had become virtually synonymous with 'indigestion' and many books were written on the subject.³ Wilson Fox⁴, Classified the dyspeptic condition as:

1. Atonic Dyspepsia
2. Neurosis of the Stomach

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How to cite this article: Umesh Kumar Chhabra, Satish Kumar Bansal, Sandeep Kumar Goyal, Gopal Singal, Sachin Bhayana, Chandrashekhar Sharma. Epidemiology of peptic ulcer disease in rural haryana: retrospective data analysis of last ten years – 800 cases. International Journal of Contemporary Medical Research 2016;3(1):141-143.

emergency encountered by surgeons.^{6,7} The etiological spectrum of perforation peritonitis in India differs significantly from its western counter parts.^{8,9,10}

MATERIAL AND METHODS

This retrospective study was carried out on data obtained from patients who underwent laparotomy for perforation peritonitis from 2004 to 2014 (ten years) in our institute. 800 of these patients who were found to have peptic perforation were included in the study. Patients with concomitant perforations eg. Enteric and in one case uterine perforation with history of D and C (Dilatation & Curettage) done 6 (six) days earlier to laparotomy were not included in this study. Patients who underwent laparotomy for peptic perforation were compared in terms of demographic data including age, sex, history of smoking, alcohol consumption, diet, history of visits to quacks for conventional (desi) medication, radiological findings and histo-pathological report. All the exploratory laparotomies were performed by qualified and experienced surgeons. Midline laparotomy incision was given in all the surgeries, any collection in peritoneal cavity was suctioned out. Thorough peritoneal lavage was done using normal saline. Site of perforation was identified, biopsied and omental patch repair was performed in each of the 800 cases as closure with an omental patch is well-established as the optimal procedure.^{11,12} The peritoneal cavity was dry

mopped and a drain was inserted in peritoneal cavity through a separate stab wound in flank and was secured to skin. Fascia (sheath) was closed in midline, skin sutures applied and a sterile dressing applied.

STATISTICAL ANALYSIS

Data so obtained was analyzed using Statistical Package for Social Science (SPSS) Version-19 data analysis software. Correlates were deduced in form of Odds Ratio.

RESULTS

Out of 800 patients operated for peptic perforation 498 had Pre-Pyloric perforation (Males 396 and Females 102), 302 had duodenal perforation (Males 176 and Females 126). The mean age was found to be 38.7 years. Out of the 176 males in Duodenal Perforation group, Smoker: 126, Alcoholic: 76 out of 126 smokers, Smoker and Alcoholic: 76, Visited Quacks: 49, Dyspepsia: 99. Out of the 126 females in Duodenal perforation group Smoker: 71, Alcoholic: 1 out of 71 smokers, Smoker and Alcoholic: zero, Visited Quacks: 31, Dyspepsia: 72. Out of the 396 males in Pre-Pyloric Perforation group, Smoker: 331, Alcoholic: 306 out of 331, smokers and Alcoholic: 306, Visited Quacks: 349, Dyspepsia: 357. Out of the 102 females in Pre-Pyloric Perforation group, Smoker:

Year	Age in Years & Sex distribution						DP	PP
	15-20	21-30	31-40	41-50	51-60	61 & above		
2004	M - 0 F - 1	M - 2 F - 2	M - 23 F - 8	M - 17 F - 6	M - 10 F - 6	M - 8 F - 2	M - 18 F - 14	M - 42 F - 11
2005	M - 2 F - 0	M - 3 F - 1	M - 19 F - 9	M - 17 F - 7	M - 9 F - 6	M - 6 F - 1	M - 17 F - 12	M - 39 F - 12
2006	M - 1 F - 1	M - 2 F - 2	M - 12 F - 8	M - 19 F - 6	M - 8 F - 5	M - 8 F - 3	M - 15 F - 14	M - 35 F - 11
2007	M - 0 F - 0	M - 1 F - 1	M - 14 F - 10	M - 17 F - 6	M - 12 F - 7	M - 10 F - 2	M - 18 F - 14	M - 36 F - 12
2008	M - 3 F - 0	M - 3 F - 1	M - 15 F - 7	M - 18 F - 4	M - 10 F - 4	M - 4 F - 3	M - 16 F - 11	M - 37 F - 8
2009	M - 0 F - 0	M - 5 F - 0	M - 19 F - 8	M - 14 F - 5	M - 10 F - 3	M - 8 F - 1	M - 17 F - 10	M - 39 F - 7
2010	M - 0 F - 0	M - 2 F - 0	M - 20 F - 10	M - 15 F - 7	M - 10 F - 3	M - 1 F - 1	M - 15 F - 11	M - 33 F - 10
2011	M - 0 F - 0	M - 6 F - 1	M - 15 F - 6	M - 15 F - 7	M - 11 F - 3	M - 5 F - 1	M - 16 F - 10	M - 36 F - 8
2012	M - 1 F - 0	M - 1 F - 0	M - 19 F - 9	M - 16 F - 5	M - 9 F - 6	M - 6 F - 1	M - 16 F - 12	M - 36 F - 9
2013	M - 0 F - 1	M - 1 F - 0	M - 16 F - 8	M - 14 F - 4	M - 7 F - 3	M - 5 F - 1	M - 13 F - 10	M - 30 F - 7
2014	M - 1 F - 0	M - 1 F - 0	M - 17 F - 5	M - 19 F - 6	M - 9 F - 3	M - 1 F - 1	M - 15 F - 8	M - 33 F - 7
Total	M - 8 F - 3	M - 27 F - 8	M - 189 F - 88	M - 181 F - 63	M - 105 F - 49	M - 62 F - 17	M - 176 F - 126	M - 396 F - 102
Grand Total	M + F = 11	M + F = 35	M + F = 277	M + F = 244	M + F = 154	M + F = 79	M + F = 302	M + F = 498

Table-1: Sex wise Distribution of total visited patients

77, Alcoholic: 3 out of 77 smokers, Smoker and Alcoholic: 3, Visited Quacks: 94, Dyspepsia: 93. In the smoker group: Risk of developing Pre-Pyloric perforation by smoking was found to be 2.4 times higher than the risk of developing Duodenal perforation. In the alcoholic group: Risk of developing Pre-Pyloric perforation by alcohol consumption was found to be 4.7 times higher than the risk of developing Duodenal perforation. In the group where treatment was taken from Quacks: Risk of developing Pre-Pyloric perforation by treatment from Quacks was found to be 6.1 times higher than the risk of developing Duodenal perforation.

DISCUSSION

One of the most common surgical emergencies is perforation peritonitis¹³ It is commonly seen in a younger age group in the tropical countries.¹⁴⁻¹⁶ Commonly the perforations involve the proximal part of the gastrointestinal tract, this being in contrast to studies from the western countries, where perforations are common in the distal part.¹⁷⁻¹⁹ Smoking and alcoholism are rampant in Haryana²⁰ more so in Rural areas. Treatment by Quacks has an attribute to the increased risk of developing Pre-Pyloric perforation because even patients do not know what drug was given to them. Quacks supposedly administer Glucocorticoids (Steroids) in order to relieve the symptoms of pain and dyspepsia without knowing the consequences of these drugs. Indiscriminate use of over the counter sold painkillers has also contributed to the overall outcome.

CONCLUSION

Male sex, alcoholism, smoking and treatment of symptoms of dyspepsia by Quacks clearly indicate that risk of developing Pre-Pyloric perforation is significantly higher than risk of developing Duodenal perforation.

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Source of Support: Nil; **Conflict of Interest:** None

Submitted: 01-12-2015; **Published online:** 15-12-2015