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# PROSPECTIVE EVALUATION OF PROGNOSIS OF HOLLOW VISCUS PERFORATION (HVP) IN PATIENT FROM DIFFERENT COMMUNITIES

Surgery

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## ABSTRACT

**Introduction:** Hollow viscus perforation (HVP) is one of the gravest surgical emergencies. This topic demands more research so newer prognostic indicators can be identified. Whether the social, familial and cultural background of a patient can influence the prognosis of HVP has not been studied. As the above mentioned factors mostly depend upon the community to which a patient belongs, difference in prognosis of HVP in patients from different communities, if any needs to be studied. **Aims and objectives :** 1.To study the prognosis of HVP in different communities.2. To identify prognostic indicators of HVP. **Materials and methods :** This was a prospective study of 72 cases of HVP , included and grouped into three communities. The prognostic factors and outcomes were studied and analysed in different communities. The data collected were analysed by SPSS software. **Results :** The mean age of presentation was 47.56 years. Males constituted 70.8% and females 29.2%. Peptic ulcer perforation (59.7%) was the most common followed by typhoid ileal (22.2%), appendicular (6.9%) of cases, traumatic (6.9%). 2.8% patients were of non specific perforation and 1.4% had tubercular perforation of ileum. There was no significant difference between the demographics and the diagnosis among the different communities. A mortality rate of 6.9% was recorded . None of the patients were re-explored. **Conclusions:** The factors such as age of the patient, presence of hypotension, altered sensorium, organ failure at presentation , type of perforation, type of intervention (operative or non-operative) and the amount of peritoneal collection were found to have a significant effect on the outcome. There was no significant difference in the outcome of patients from different communities in the study.

## KEYWORDS

HVP, typhoid ileal, , appendicular, tubercular perforation ,organ failure.

## INTRODUCTION

Hollow viscus perforation is one of the gravest surgical emergencies. It is one of the common emergencies encountered in surgical practice. In spite of the rapid advances in medical field, these patients mostly require aggressive operative intervention. Although spontaneous bacterial peritonitis is also seen, it remains an uncommon cause of peritonitis in clinical practice.

Since olden times, perforation of hollow viscus has been recognised as a grave surgical condition with a bad outcome. Certain types of perforations were deemed incurable earlier. A dictum was not to operate on typhoid perforations as patient would not survive anyway. If a patient survived after being operated upon for suspected typhoid perforation, the diagnosis itself was put to question. However, with better antibiotics and improvement in the overall standard of care in recent times, the prognosis in these cases has improved drastically.

Hollow viscus perforation can occur at any site from the oesophagus up to the rectum. The presentation of these cases varies widely depending upon the site of perforation. Hence in all cases, the history, symptoms and signs shall be looked at carefully to determine the site of perforation. In most of the patients, attaining hemodynamic stability should be the primary goal, following which expeditious operative intervention with intensive post-operative care should be given.

## MATERIALAND METHODS

This was a prospective study from September 2010 to August 2012 conducted in Department of Surgery, RIMS, Imphal. 72 cases of HVP were included and grouped into three communities. The prognostic factors and outcomes were studied and analysed in different communities. The data collected were analysed by SPSS software. The patients were divided into 3 groups as follows:-

**Group A :**comprising of patients from plain areas of Manipur except Muslims.

**Group B:** comprising of patients from Muslim community.
**Group C:** comprising of patients from hilly areas of Manipur

**Inclusion criteria:** All patients of any age or sex who presented to the General Surgery Outpatient Department or in the casualty of the Regional Institute of Medical Sciences, Imphal, Manipur with hollow viscus perforation during the study period, were included in the study.

Exclusion criteria: Patients brought dead to the hospital,Patients who refused treatment or denied consent to participate in the study,Patients who took leave against medical advice,Patients who failed to turn up for follow up for 3 months

**Sample size:** Seventy two (72) cases of hollow viscus perforation attending the surgical OPD or casualty of RIMS hospital fulfilling the eligibility criteria were included in this study. This sample size was bigger than the proposed sample size of minimum of 60 patients.

## RESULTS

The mean age of presentation was 47.56 years. Males constituted 70.8% and females 29.2%. Peptic ulcer perforation (59.7%) was the most common followed by typhoid ileal (22.2%), appendicular (6.9%) of cases, traumatic (6.9%). 2.8% patients were of non specific perforation and 1.4% had tubercular perforation of ileum. There was no significant difference between the demographics and the diagnosis among the different communities. A mortality rate of 6.9% was recorded . None of the patients were re-explored.

**Table 1 Age group wise distribution of the patients in study**

| Age group | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 0-15 years | 1 | 1.4 | 1.4 |
| 16-35 years | 24 | 33.3 | 34.7 |
| 36-60 years | 27 | 37.5 | 72.2 |
| >60 years | 20 | 27.8 | 100.0 |

**Figure 1: Bar-chart showing pattern of diagnosis in the 3 groups**

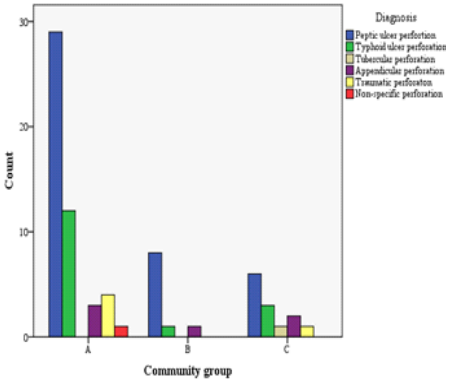

**Table 2 Site of perforation:**

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Not ascertained | 4 | 5.6 | 5.6 |
| Stomach | 2 | 2.8 | 8.3 |
| Duodenum | 39 | 54.2 | 62.5 |
| Jejunum | 2 | 2.8 | 65.3 |
| Ileum | 17 | 23.6 | 88.9 |
| Appendix | 6 | 8.3 | 97.2 |
| Colon | 2 | 2.8 | 100.0 |

## DISCUSSION

516 patients were diagnosed with hollow viscus perforation and treated for it in Department of Surgery, RIMS, Imphal. Of these 72 patients were included in the present study based on inclusion and exclusion criteria. They were divided into 3 groups as per the protocol of study and 49 were placed in group A, 10 in group B and 13 in group C. The data was analysed using SPSS software.

The age of the patients ranged from 12-87 years and the mean was 47.56 years with standard deviation of 19.409 years. This is similar to observation made by Jhobta RS et al29 who reported a range of 3 to 90 years for age of the patient with mean of 36.8 years.

Males were significantly more in number as compared to females. This observation is similar to that made by Jhobta RS et al29 who reported males comprising 84% of the patients in their study.

The incidence of traumatic perforation was found to be 6.9%. This is lower than the observations made by Jhobta RS et al29 and Sanjay Gupta et al34 who in their study on similar patients found the incidence of traumatic perforations to be around 15%. The incidence was low in other studies too but higher than this study. This may in part be due to the fact that high speed road accidents are less common in Manipur.

4 patients (5.6%) were treated non-operatively in our study. These patients had poor condition at presentation and presence of co morbidities. This is similar to the study by Trevor J et al55 who tried non-operative treatment for patients with co morbidities. Also this in accordance with standard surgical texts.13,14,15

The commonest site of perforation was gastroduodenum (57%) followed by ileum (23.6%), appendix (8.3%), jejunum (2.8%) and colon (2.8%). The commonest diagnosis was peptic ulcer perforation (59.7%) and the least common was non-specific perforation (1.4%). These results are similar to the results of studies done by Jhobta RS et al29 and Sanjay gupta et al34 who found similar trends in diagnosis with gastroduodenal perforations being the commonest followed by typhoid ileal perforation. They too reported that colonic perforations were uncommon. This is in contrast to western world where the studies reveal higher incidence of colonic perforations. Also it highlights the fact that typhoid ileal perforation is still common and that typhoid is still endemic in our country.

. Hence, novel studies to find newer prognostic indicators on this fairly common surgical emergency should be conducted.

## CONCLUSIONS

The factors such as age of the patient, presence of hypotension, altered sensorium, organ failure at presentation , type of perforation, type of intervention (operative or non-operative) and the amount of peritoneal collection were found to have a significant effect on the outcome. There was no significant difference in the outcome of patients from different communities in the study.

## REFERENCES:


1. Miriam J Baron, Dennis L. Kasper. Intraabdominal infections and abcscesses. In:Fauci, Braunwald, Kasper, Hauser Longo, Jameson, Loscalzo, editors. Harrison's principles of internal medicine. 17th ed. United States of America: McGraw Hill Companies Inc; 2008.p 807-13.
2. Noguiera C, Silva AS, Santos JN, Silva AG, Ferreira J, Matos E, et al. Perforated peptic ulcer: main factors of morbidity and mortality. World J Surg 2003;27:782-7.
3. Svanes C, Lie RT, Svanes K, Lie SA, Soreide O. Adverse effects for delayed treatment for perforated peptic ulcer. Ann Surg 1994;220:168-75.
4. American College of Chest Physicians/Society of Critical Care Medicine. Consensus conference: definitions for sepsis and organ failure and guidelines for the use of innovative therapies in sepsis. Crit Care Med 1992;20:864-74.
5. Smink DS, Soybel DI. Appendix and appendectomy. In: Zinner MJ , Ashley SW, editors. Maingot's abdominal operations. 11th ed. New York: Mcgraw Hill Companies Inc; 2007.p 603-6.
6. Mercer DW, Robinson EK. Stomach. In:Townsend CM, Beauchamp RD, Evers BM, Mattox KL, editors. Sabiston textbook of surgery, 18th ed. Philadelphia: Saunders Inc, an imprint of Elsevier Inc; 2009.p 1240-51.
7. Rigopoulos A, Ramboiu S, Georgescu I. A critical evaluation of surgical treatment of perforated ulcer. Current Health Sciences J 2012;38(2).
8. Michael FC, Matthew TM, Eugene Mcgray, Ida M Onorato. Tuberculosis and Race/Ethnicity in the United States-Impact of Socioeconomic status. American J of Resp and Crit Care Med 1998;157:1016-20.
9. Wolff H. On the history of surgical treatment of peritonitis. Zentrabl Chir 2002 Jan; 127(1): 62 -7.
10. Smith EB. Perforation of gall bladder: A clinical study. J Natl Med Assoc 1981 April;73(4):333-5.
11. Han YM, Lee JM, Lee TH. Delayed colon perforation after palliative treatment for rectal carcinoma with bare rectal stent. Korean J Radiol 2000 Jul-Sep;1(3):169-71.
12. Desmond AM. Perforated peptic ulcer-selective gastric resection in emergency treatment. Calif Med 1962 May;96(5):315-20.
13. Cairns BA, Woller D, Meyer AA, Napolitano LM, Rutledge R, Baker CC. Management and outcome of abdominal shotgun wounds, trauma score and the role of exploratory laparotomy. Ann Surg 1995 March;221(3):272-7.
14. Daly BD, Guthrie JA, Couse NF. Pneumoperitoneum without peritonitis. Postgrad Med J 1991 November;67(793):999-1003.
15. Berardi RS, Lee SS, Chen HP, Stines GJ. Stercoraceous and spontaneous perforations of the colon. Int Surg 1987;72:235-40.
16. Pettigrew RA. Delayed primary wound closure in gangrenous and perforated appendicitis. Br J Surg 1981; 68:635-8.
17. Berger PL, Shaw RE. Spontaneous rupture of the colon. Br Med J 1961 May 20; 1(5237):1422-5.
18. Krausz MM, Abdou B, Hershko DD, Mahajina A, Duek DS, Bishara B, Israelit SH. Laparoscopic diagnostic peritoneal lavage (L-DPL): A method for evaluation of penetrating abdominal stab wounds. World J Emerg Surg 2006; 1:3.
19. Gupta S, Robin K. Peritonitis – The eastern experience. World J Emerg Surg 2006;1:13. Slaninka I
20. , Páral J, Chobola M, Motycka V, Ferko A, Bláha V. Peritonitis caused by gastrointestinal perforations-analysis of an elderly patient group. Rozhl Chir 2009 Nov;88(11):656-61. Sendt W
21. , Amberg R, Hassan A, von Specht BU, Schöffel U. Secondary peritonitis: severity of disease and activation of peritoneal cells. Eur J Surg 2001 Jun;167(6):426-32. Gedik E
22. , Girgin S, Taçyildiz IH, Akgün Y. Risk factors affecting morbidity in typhoid enteric perforation. Langenbecks Arch Surg 2008 Nov;393(6):973-7. Ohmann C
23. Hau T. Prognostic indices in peritonitis. Hepatogastroenterology 1997 Jul-Aug;44(16):937-46. Tan KK, Hong CC, Zhang J, Liu JZ, Sim R. Predictors of outcome following surgery in colonic perforation: an institution's experience over 6 years. J Gastrointest Surg 2011 Feb;15(2):277-84..