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Retrospective Study of Open Surgical Suture for Duodenal Ulcer Perforation in 8 Years

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Abstract

Du perforation is common complication of PUD. Patients needs prompt resuscitation and surgical suturing of perforation. Mortality rate [1] is 15.2% and morbidity [1] is 5.2%. But mortality is low in early diagnosis & prompt treatment. Again operative outcome depends on skill, experience and procedure.

Materials: This is retrospective study in Jorhat Medical College & Hospital where total 75 numbers of patients from January 2010 to December 2017 were analysed to evaluate effective and save open surgical suture.

Result: In one layer repair two patients had bile leak and both expired. 3 patients had symptoms of APD. In one layer suture two patients had bile leak and both died. Definitive surgery is always restricted to its complication. In follow up, three patients were assessed to have clinical feature of APD. It responded to PPI. Laparoscopic repair has no provent advantage in PPU. Mean Age is 39.61 in Group A and 36.37 in Group B. Standard Deviation is ± 3.09 in Group A and ± 5.86 in group B. Chi-Square Test is 4.022 and P-value is 0.0525. So P value is just significant at 5% or not significant. Gender is not related to age for diseases as P-value is high.

Conclusion: Two layer open surgical suture in PPD is found safe and secured than one layer suture.

Keywords: DU (Duodenal Ulcer); PUD (Peptic Ulcer Disease); APD (Acid Peptic Disease); GOO (Gastric Outlet Obstruction); PPU (Perforated Peptic Ulcer).

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Introduction

The PPU is surgical emergency which needs prompt resuscitation and surgical closure. Definitive surgery is restricted to its complication. Prognosis depends on duration of perforation. Outcome of Surgery depends on skill, procedure and experience. Minimally invasive Laparoscopic Surgery has no proven advantage in PPU. The annual incidence of APD from physician diagnosis is 0.10% to 0.19% but 0.03% to 0.17% in hospital data [2]. The first part of duodenum is common site which accounts for 98% 3. Mortality rate is related to age time of diagnosis and initiation of treatment. The overall mortality and mobidity are 15.5% and 5.2% respectively [1]. In acute PPU cure rate is 85% and in chronic 25% [1].

Aims

To evaluate the effective and safe open surgical suture in PPU.

Materials and Methods

It is retrospective study carried out in Jorhat Medical College, Jorhat, where total 75 patients of PPU had undergone open surgical closure in January, 2010 to December, 2017 were analysed. They were categorized into two groups:-

A. Single layer closure with omental fold. *(47 Patients)*

B. Two layer closure with omental fold *(28 Patients)*

Methods

Andomen is opened through upper midline incision. PPU is trimmed and repaired with single or double layers with omental fold. Through peritoneal toilet is done. Two drains, one in hepatorenal pouch and another in pelvic are inserted.

Investigation

Specific: Chest X-ray in erect, sitting position shows gas under diaphragm in 75% [4].

USG Abdomen reveals free fluid with debridge and gas under diaphragm.

Post operative day: Liquid diet was allowed on 7th Day. On 10th Day patients were discharged. Stitches were removed after 2 (two) weeks.

Results

In one layer repair two patients had bile leak and both expired. 3 patients had symptoms of APD.

Follow up

Post operative patients were followed up monthly upto 3 months. All patients were assessed for APD, ± GI bleed and GOO.

Discussion

In one layer repair, when sutures are tied on omentum, suture may cut through or become loose under cover of omentum. In two layer, when omentum is tied inner layer remains unaffected. Serosal layer gives tension releasing support tio inner layer and becomes impervious covering to leak. Two layer repair does not impair vascularity. Laparoscopic surgery has no proven advantage in PPU.

Table 1: Demographic and follow up details

Parameter	Group A	Group B
Age (Mean)	39.61	36.39
Male	46	26
Female	1	2
Death	2 (4.2%)	0
Gastric Outlet Obstruction	0	0
Recurrent APD Symptoms	3 (6.3%)	0
Recurrent APD Bleed	0	0
Elective TV, GJ	0	0

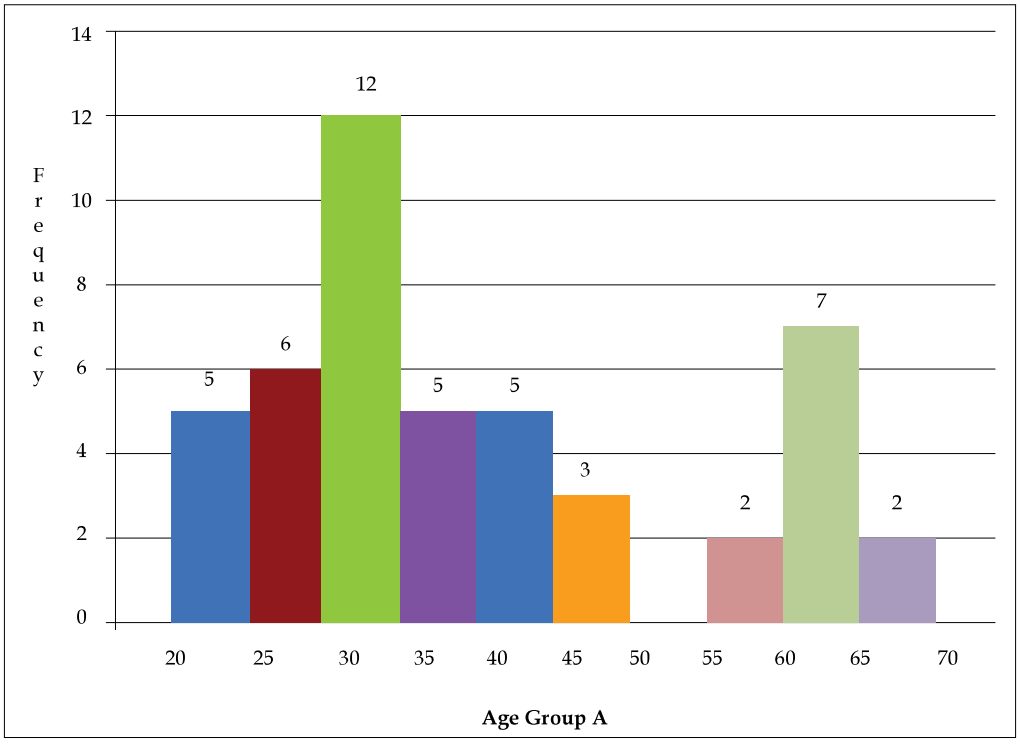

Fig. 1: Histogram of Age and frequency of Group A

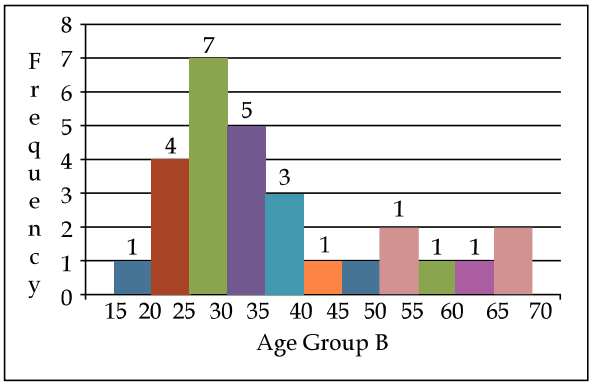

Fig. 2: Histogram of Age and frequency of Group B:

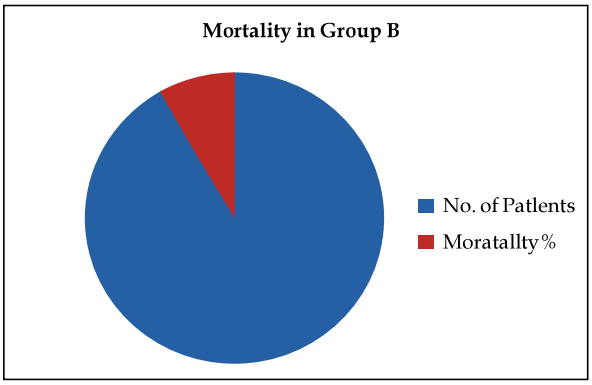

Fig. 3: Mortality in Group B

Statistics

Table 2:

Group	Mean	Median	Mode Mo	Range	Mean Deviation	SD σX	SD Error Mean	S E Proportion	S E Difference	Gender Age P-value	Chi-square χ^2(k)	p Value
A	39.61	35	35	48	± 37.96	± 3.09	0.06	2.88	1.19	1.17	4.022	0.052
B	36.39	30	30	45	± 34.40	± 5.86	0.11	1.85	1.19	2.8		

Conclusion

Two layer repair in PPU is safe and effective.

Compliance with ethical standards:

It is retrospective study.

Conflict of Interest:

The author declares that he has no conflict of interest.

Funding Source:

None

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