Omental plugging of large perforated duodenal ulcers - A prospective comparative study with conventional Graham’s closure

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ABSTRACT

Objective: To compare the clinical outcome of closure of large duodenal perforations with omental plugging versus Graham’s repair.

Methods: In our study out of 61 patients of large duodenal perforation, 30 patients were repaired with Graham’s method (control group), 31 patients with Omental plugging (study group) and studied as per proforma and analyzed.

Results: Duodenal perforation occurred commonly in 40 - 60 years of age group. Males constituted 86.88% and females 13.12%. Post operative complications were more common in Graham’s repair than omental plugging with P value 0.001. Most common complication was wound infection (22.9 %). In this series, the mortality rate is 6.6% mostly associated with Graham’s repair.

Conclusion: Omental plugging is an easy and valued technique for emergency closure of large duodenal perforation, of delayed presentation with less post operative complications and mortality.

Key words: Grahams closure, Large Duodenal perforation, Omental plugging.

Introduction:

Large Duodenal ulcer Perforation (> 2cm)¹ is the most common complication of peptic ulcer disease. Though it is a common surgical emergency, literature is silent on the exact definition, incidence, management and complications of large perforation of peptic ulcers. There are a number of options for closure of large perforation like omental patch, controlled tube duodenostomy, jejunal pedicled graft, jejunal serosal patch, free omental plug, partial gastrectomy and pyloric exclusion² but none has gained wide acceptance.

Thus there is a need to find, evaluate and apply appropriate method of managing the ever challenging clinical scenario of large duodenal perforations.

Materials and methods:

This is a prospective comparative study of the large duodenal perforations admitted to the Department of General Surgery, VIMSAR, and Burla from November 2014 to October 2016.

All patients diagnosed with perforated duodenal ulcer of size >2 cm were included in the study excluding patients having severe co-morbidities i.e. failure of organ systems, recent MI, malignancy, patients having multiple perforations and patients who have undergone gastrointestinal surgeries in the past.

Total 736 numbers of patients with peptic perforation were admitted and undergone exploratory laparotomy. Out of 736 peptic perforations, 61 numbers of patients had large duodenal perforation.

Institutional ethical committee was informed and had approved the two procedures i.e. (a) omental plug repair (b) Graham’s patch repair. Random numbers were generated from the computer and allocated to the patients. Then the patients were broadly divided into two groups: (1) Study Group: These patients undergone the omental plug repair (Figure: 1, 2 & 3) as advocated by Karanjia et al. (2) Control Group: These patients undergone Graham’s patch repair.

Results:

In this study large duodenal perforations were 61 in number of 736 total peptic perforations, which is 8.28%. The incidence of large duodenal perforation increasing with increase in age and common in males with male: