EFFECT OF H_2 ANTAGONISTS ON OUTCOME OF SIMPLE CLOSURE FOR PERFORATED DUODENAL ULCER

K B H Koh, K W Chang

ABSTRACT

The treatment of perforated duodenal ulcer is controversial. Since the advent of H_2 antagonists, the number of ulcer operations has declined tremendously. We wanted to find out if the addition of a H_2 antagonist after simple closure of a perforated duodenal ulcer would change the outcome and therefore reviewed 46 patients treated in this fashion. Our results show that this is a safe and effective way of treating patients with perforated duodenal ulcer.

Keywords: Perforated duodenal ulcer, simple closure, H_2 antagonist.

SINGAPORE MED J 1992; Vol 33: 472-473

INTRODUCTION

Since Mickulicz first reported the suture closure of a perforated duodenal ulcer in 1884[1], the traditional treatment of a perforated duodenal ulcer for nearly a century has been operative suture closure. Emergency definitive surgery has its proponents[2,3] but also carries with it increased risks and complications especially in less experienced hands[4]. In addition, with available selection criteria (length of ulcer history, macroscopic appearance of the ulcer), up to a third of patients would have unnecessary definitive surgery . The introduction of H_2 antagonists now provides us with an additional treatment modality for duodenal ulcer. Since its arrival, the number of elective ulcer operations has fallen dramatically[6,7]. This retrospective study shows that a policy of simple closure of perforated duodenal ulcers followed by H_2 antagonists to treat the ulcer diathesis is a safe and effective one which should be recommended.

PATIENTS AND METHODS

During the period 1981-1988, we saw 61 patients with perforated duodenal ulcer who were treated with simple closure and post-operative H_2 antagonist. This is a retrospective study with data obtained from patient records. The records were critically evaluated for age, sex and duration of preoperative dyspeptic symptoms and post-operative course. Patients with a dyspeptic history of more than 3 months were considered to have chronic duodenal ulceration. Forty-six patients had a follow-up period of at least 12 months with a median of 22 months. The remainder were lost to follow-up and are excluded. We used the Visick[8] classification to assess the patients on follow-up.

RESULTS

The mean age of presentation was 45.8 years for males (range 15-32 years) and 56.2 years for females (range 25-89 years). There was a male preponderance of 79%.

Eighteen of the 46 patients (39.1%) had acute ulcers. Twenty-seven of the 46 patients (58.7%) remained asymptomatic in Visick Class 1 after a follow-up of more than 12 months. Nineteen (41.3%) developed symptoms but only 5(11.9%) were in the poor Visick grades 3 and 4. (Table I).

Table I - Severity of Ulcer Symptoms After Perforation by Visick Classification

Class 1	27
Class 2	14
Class 3	2
Class 4	3
Total	**46**

When we analysed the patients with acute and chronic ulcers separately, we found that 17 of 18 (94.4%) patients with acute ulcers did satisfactorily while 24 of 28 (85.7%) patients with chronic ulcers did well. (Table II).

Table II - Duration of Ulcer Symptoms Related To Result of Therapy

Ulcer Symptoms (Months)	Satisfactory (Visick 1&2)	Unsatisfactory (Visick 3&4)	Total
< 3 (acute)	17	1	18
>3 (chronic)	24	4	28
Total	41	5	46

Three patients underwent further surgery. One had a reperforation 2 months after the initial operation, one had significant dyspepsia 9 months later and the third developed bleeding from an ulcer 2 years later.

Eight patients (17.4%) suffered some form of post-operative morbidity (Table III). One patient died after initial surgery. He had underlying liver cirrhosis and end stage liver failure.

Table III - Complications Following Simple Closure

Pneumonia	3
Wound Infection	2
Subphrenic abscess	1
Duodenal fistula	1
DVT	1
Total	**8**

Department of Surgery
University Hospital
Lembah Pantai
59100 Kuala Lumpur
Malaysia

K B H Koh, FRCS(Glas), FRCS(Edin)
Medical Officer

K W Chang, FRCS(Glas)
Associate Professor

Correspondence to: Dr K W Chang

DISCUSSION

This retrospective study shows that simple closure followed by H_2 antagonist therapy is a safe and effective means of dealing with perforated duodenal ulcers. Primary closure has the advantage of simplicity in inexperienced hands and is the procedure of choice in patients who are very ill[9]. In addition, unnecessary definitive surgery is avoided. Our re-operative rate of 6.5% (3 out of 46 patients) after a median follow-up of 22 months shows that only a very small number of patients actually develop further complications or symptoms severe enough to warrant subsequent surgery. 41.3% of our patients developed further symptoms postoperatively but only in 11.9% were the symptoms severeor were there complications. Statistical comparison with two previous studies after primary omental patch closure show a significance of $p<0.001$ against the study by Griffin et al[10] while there was borderline significance of $p<0.1$ against the study by King et al. The introduction of H_2 antagonists has changed the indications for surgery for peptic ulcer disease, and we are convinced that emergency definitive surgery is not indicated in dealing with perforated duodenal ulcer.

The proponents for emergency definitive surgery[2,3] have recurrence rates which compare with those in this series. Morbidity and mortality rates are reported to be low but their patients are from a preselected group with low risk and the operations are done by experienced surgeons. In addition, many patients would undergo unnecessary surgery[5]. Multiple criteria have been evaluated to identify a group of patients who would benefit from emergency definitive surgery but results are not helpful[5,10,11].

The availability of H_2 antagonist now offers us the opportunity to reappraise the role of simple closure of perforated duodenal ulcers.

ACKNOWLEDGEMENTS

We are grateful to Assoc Prof John Arokiasamy and Mr L H Ong for assistance in the statistical analysis.

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