

**A Controlled Double Blind Trial Comparing
Alsarex to Cimetidine and Placebo in
Endoscopically Proved Peptic Ulcer
Sharad C. Shah*, R.C. Shah**, A.G. Shsh***, P.G. Goyal****.**

Key Words: - ALSAREX, H₂ – receptor antagonists, Cimetidine, duodenal ulcer, gastric ulcer.

SUMMARY:

Forty-six cases of peptic ulcers, selected after endoscopy, were put on trial after detailed investigations. Those were divided into three groups of 16, 16 and 14 and a controlled double blind trial was conducted comparing ALSAREX with Cimetidine and Placebo.

ALSAREX tablets and Placebo treatment were administered in a dose of 2 tablets q.i.d. while Cimetidine was given as 200 mg. thrice a day followed by 400 mg. at bedtime. Patients were advised to adhere to a bland non-spicy diet and were regularly followed up. The treatment lasted for a period of six weeks.

The final assessment showed that ALSAREX gave the best results in 14 cases (87.5%) followed by Cimetidine in 12 cases (75%) and Placebo in 4 cases (28 %). No side effects were noted except for one case, which was on Cimetidine where the patient suffered from the problem of mild fluid retention.

INTRODUCTION:

Peptic ulcer is characterized by the ulceration of the Gastro-intestinal mucosa starting as erosion due to the combined action of hydrochloric acid and pepsin. Though, mainly located in the stomach & duodenum ulcers may also occur in the esophagus or in Meckel's diverticulum where heterotopic gastric mucous membrane may be present.

The precise etiology of ulcers is not yet clear. A number of constituting factors lead ultimately to the aggressive forces of acid – pepsin over the defensive mechanism of the mucous membrane. Stress certainly leads to hyperacidity, engorgement and greater fragility of capillaries, increase in gastric secretion and reduction in mucosal resistance. Other factors like spicy and/or irregular diet, genetics, particular blood groups, are

also responsible for ulcers.

PRINCIPLES OF TREATMENT:

Treatment aims at achieving 3 objectives:

1. Relief of symptoms.
2. Healing of the ulcer.
3. Prevention of relapse.

Antacids have proved satisfactory for symptomatic relief but healing often does not occur. Long term therapy and the consequent high dosage, the chalky taste, constipation and/or diarrhea, and the risk of alkalosis by the absorbable antacids are some of the drawbacks. Glycyrrhiza and its derivatives like carbenoxolone sodium have been found helpful in bringing about healing of gastric ulcers but may lead to salt retention and potassium loss which in time may precipitate heart failure in the elderly.

Anti-cholinergics proved satisfactory to a limited extent only. Colloidal Bismuth e.g. De-Nol and Aluminium compounds derived from Sucrose e.g. Octasulphate or Sucralphate. form a protective coating and neutralize local acidity. The side effect of constipation has been reported from time to time.

Drugs in the category of H₂ antagonists like Cimetidine and Ranitidine give results, which are satisfactory. However the relapse rate still causes concern .

Combination therapy therefore, appears necessary to tackle this psychosomatic problem at all levels to provide a complete therapy.

The authors conducted a trial with ALSAREX, an indigenous Ayurvedic drug, which holds great promise in peptic ulcer therapy according to published results. When we compare the absence of any observed or reported side effects with respect to ALSAREX compared to the known side effects of other drugs used to treat peptic ulcers, ALSAREX appears to be the drug of choice for first line therapy in peptic ulcer. This perspective is strengthened when one considers the point of economy since the cost of the daily therapy with Cimetidine is more than eight times than that of ALSERAX – a point of particular importance in this country.

DRUG

Alsarex tablet is a conglomeration of herbs, which act in various different ways, so as to rectify the impairment of the digestive system.

From perusal of the actions of the ingredients it seemed reasonable to expect benefits in all three ways i.e.

1. Relief of symptoms.
2. Healing of ulcer.
3. Reduction of relapse rate.

Hence, the doctors carried out a clinical trial with ALSAREX.

PATIENTS & METHODS:

Patients who had a clinical history of peptic ulcer were selected, from the Gastro-enterology Department of J. J. Hospital, Bombay, for the study. Detailed information about complaints, past history of illness, personal and family history, dietary habits, drugs taken and operations undergone, etc. were recorded with measures of height, weight and blood pressure. They were then subjected to clinical examination of the alimentary system with special reference to the tender area of the abdomen. Laboratory examination of urine, stool and blood along with gastric analysis, barium meal radiological tests and endoscopic examination were conducted. Observations were recorded with regard to the ulcer and condition of the mucosa. Cases of gastric carcinoma, chronic adherent ulcers and those with history of previous therapy or operations were excluded. Our findings about this are presented in Tables I, II and III.

TABLE I

Classification by sex and age group :

Age in years	Below 30	31-40	41 - 50	51 & above	TOTAL
MALES	14	18	3	5	40
FEMALES	1	3	1	1	6
TOTAL	15	21	4	6	46

TABLE II

SYMPTOMS	No. of Patients
1. Pain	31
2. Discomfort	15

3. Vomiting	4
4. Acid eructation	12
5. Epigastric burning	18

TABLE III

Detection of Ulcer by	Duodenal Ulcer	Gastric Ulcer	TOTAL
Barium Meal	8	4	12
Endoscopy	38	8	46

We selected a total of 46 cases of uncomplicated peptic ulcers, for the trial, (38 duodenal & 8 gastric) confirmed by endoscopy. Barium meal examination had shown only 12 cases of peptic ulcer – 8 duodenal & 4 gastric.

46 cases were divided into 3 groups & treated as in table IV with a dosage of 2 tablets q.i.d. for ALSAREX and Placebo & 200 mg once in the day followed by 400 mg. at bedtime for Cimetidine. All three groups were advised a non-spicy bland diet with milk.

TABLE IV

Group Number	Drug Given	No. of Patients
I	ALSAREX	16
II	CIMETIDINE	16
III	PLACEBO	14

The three types of tablets used for the trial looked identical and were obtained in coded containers. Neither the patients nor the endoscopists had any knowledge as to the nature of the tablets that were dispensed by a Research Assistant. The decoding was carried out only after recording all the findings of the trial.

The treatment was carried out for a total period of six weeks with a weekly review of symptoms and signs followed by investigation and endoscopy. The findings were recorded with special attention to the side effects of the drug, if any.

Follow up of the cases to determine the rate of relapse, a major problem in ulcer therapy, was not possible. The number of ulcers in a particular area of the mucosa was recorded. The chi square distribution technique was used for statistical analysis.

RESULTS:

Decoding showed that ALSAREX gave the best result in $10 + 4 = 14$ (87.5%) cases followed by Cimetidine in $4 + 8 = 12$ (75%) cases and placebo in $2 + 2 = 4$ (28.6%) cases. No side effects were noted except for one case with Cimetidine where the patient suffered a mild fluid retention.

Compared to placebo, the healing effects of ALSAREX and Cimetidine are statistically significant ($p < 0.001$).

Comparison of ALSAREX to Cimetidine showed no statistical difference between the two groups ($p < 0.05$). Our results have been tabulated in Tables VA and VB.

TABLE V A

DRUG	No.of Patients	<u>Degree of healing of ulcer</u>					
		Full		Partial		Nil	
		A1	A2	A1	A2	A1	A2
ALSAREX *	16	10	62.5	4	25	2	12.5
CIMETIDINE ** 200 mg.	16	04	25.0	8	50	4	25
PLACEBO	14	02	14.3	2	14.3	10	71.4

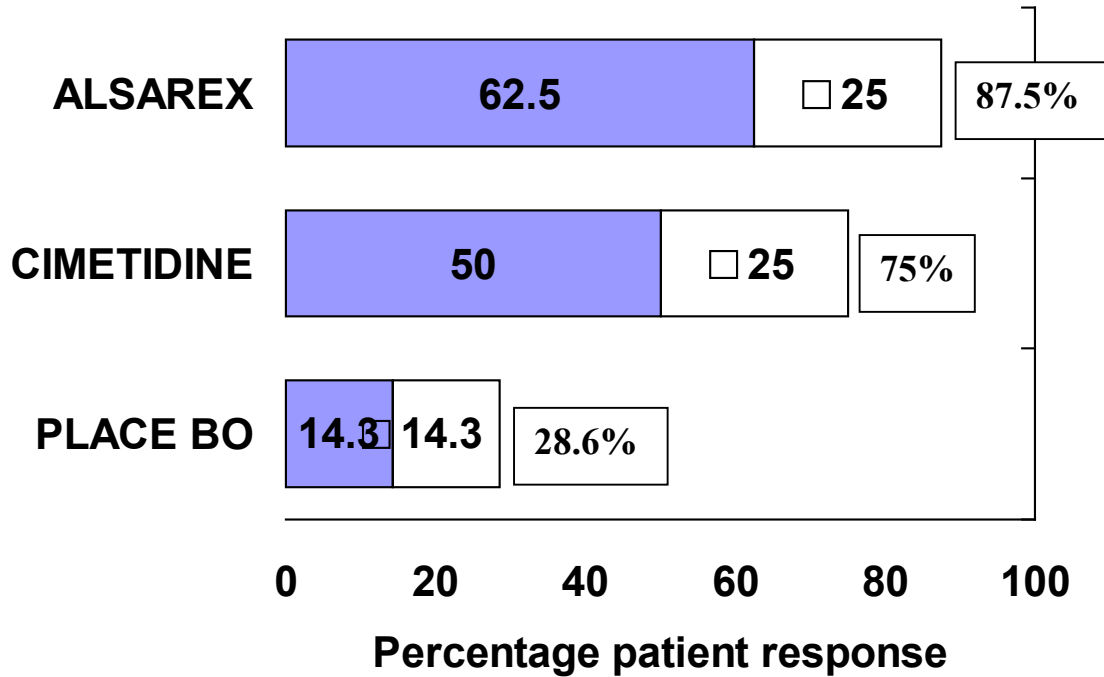
A1 = Number of patients on drug.

A2 = % of total patients on drug.

* $p < 0.001$

** $p < 0.05$

TABLE VB



 Good (Healed)  Fair (Partially healed)

With regard to percentage benefits to the patient, we found ALSAREX superior to Cimetidine in terms of both complete healing (ALSAREX 62.5% Cimetidine 25%) as well as total over all results which included complete and partial healing (ALSAREX 87.5%, Cimetidine 75%).

Though a long-term study with a large number of ulcer patients is necessary for a more accurate assessment of the drug, the results show that ALSAREX is a preferred drug in the treatment of uncomplicated cases of gastric and duodenal ulcers.

ACKNOWLEDGEMENTS:

We thank:

- 1.The Dean, J.J.Hospital for allowing us to conduct the trial.
- 2.The medical and para medical staff of our department for their help in conducting the trial and compilation of data.

3. The patients for their co-operation.
4. M/s. Charak Pharmaceuticals (India) Pvt.Ltd, Bombay, for liberal supply of coded drugs for the trial.

REFERENCES :

1. Bockus H.L. "Gastroenterology", V.B. Saunders Co., Philadelphia & London, 1963.
2. David J.G., Iswariah V. Guruswami M.N., "Pharmacology & Pharmacotherapeutics", P. Vardachary & Co. Madras, 1968.
3. Grossman M.I. et. al. "A new look at peptic ulcer", Ann. Intern. Med. 1976, 84: 57-67.
4. Peterson W.L. et. al, "Healing of Duodenal ulcer with an antacid regimen", Engl. J. Med. 1977: 297:344-345.
5. Barry R.E and Ford J. "sodium content and neutralizing capacity of some commonly used antacids", B.M.J. 1978: 413 : 6110.
1. Domschke W. et al., "Gastric epithelial cell turnover, mucus production and healing of gastric ulcers with carbenoxolone", GUT, 1977; 18: 817-820.
2. Brooy S.J.L.A, et. al., "controlled comparison of cimetidine & Carbenoxolone sodium in Gastric ulcer", B.M.J. 1979; 1: 1308-1309.
3. Salmon P.R. Bronn. P. Williams R, Read A.E. "Evaluation of colloidal Bismuth (De-Nol) in the treatment of duodenal ulcer employing Endoscopic selection and follow-up", GUT, 1974; 15: 189-193.
4. Ishrimort N. "Safety experience with Sucralfate in Japan", J. Clin. Gastro-enterology, 1981; 3 : 169-73.
10. Editorial, "Cimetidine and Ranitidine", Lancet, 1982; (i) : 601-2.
11. Kadasane D.K., "Duodenal Ulcer – A clinical trial with an indigenous drug – ALSAREX ", Current Medical practice, 1975; Vol 19.
12. Singh D., "Peptic Ulcer – A double blind trial with an indigenous Drug", Current Medical Practice, 1978; Vol. 22.