

—Short Communication—

## MASTIC IN TREATMENT OF BENIGN GASTRIC ULCERS

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### Introduction

Mastic is a resinous exudate from the plant *pesticia Lentiscus* which belongs to the Family *Anacardiaceae* and is cultivated in the Mediterranean countries, particularly in the Grecian Archipelago and especially on the island of Scio in the Aegean sea<sup>1)</sup>.

Since ancient times mastic has been used by local inhabitant and traditional healers in many parts of the Mediterranean area for relief of upper abdominal pain and heartburn. This probably originated from the Arabic Medicine around the tenth century because mastic was mentioned by the Arab physicians Ibn Al-Jazzar and Ibn Al-Baytar for the treatment of gastric ulcers<sup>2,3)</sup> and for intestinal ulcers<sup>3)</sup>.

Recently a double blind controlled clinical trial in Arbil Teaching Hospital (North of Iraq), showed mastic to have statistically significant effect in relieving symptoms and healing of duodenal ulcers<sup>4)</sup>.

It was therefore decided to use mastic in the treatment of a number of patients with benign gastric ulcers as well.

### Case Reports

Mastic extract was used in the treatment of six patients with benign gastric ulcers which were definitively diagnosed endoscopically and histologically in an open clinical trial after obtaining their consent. All patients were over 20 years and consisted of five males and one female. The female patient was a 70 year-old diabetic with ischemic heart disease and atrial fibrillation and had not responded to several courses of Cimetidine. The remainder five male patients had neither clinical nor laboratory evidence of diseases other than gastric ulcers. Treatment with mastic extract was commenced provided that they had not received recent treatment in the previous two months with H<sub>2</sub> Blockers, Bismuth, Carbenoxolone or Sucralfate. Mastic extract (in powder form) was given in doses of one gram twice daily (one dose before breakfast and the other at bedtime) for four weeks. Routine laboratory investigations included general urine examination, complete haematological and biochemical profiles at 0, 2 and 4 weeks during the course of treatment and monthly for two months after the course of treatment. Endoscopic follow-up was performed every two weeks by the same physician (FUH), and the endoscopic findings were recorded on video tapes. Endoscopic healing was defined as complete re-epithelialization of the ulcer without appearance of new ulcers<sup>5)</sup>. One

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of the patients had double gastric ulcers. The patients were told to give up smoking, avoid fried food and anti-inflammatory agents. They were allowed to take antacids tablets (Gastrigel tablets) on demand for relief of upper abdominal pain. The clinical and laboratory evaluation and follow-up were done by the other author (MJH).

Complete symptomatic relief was found in all six patients at a mean duration of seven days after commencement of therapy.

Endoscopic healing was found in five patients (including the patient with double gastric ulcers and the elderly female patient) at the end of treatment for four weeks.

Neither clinical side effects nor abnormalities in laboratory test results were observed during the course of treatment and two months later.

### Comment

The dose of mastic extract used in these patients did not exceed the quantities used by the public as chewing gum, breath sweetener or food flavourings. There are no reports of side effects of mastic either from non-medical uses or in the Pharmacognosy and Encyclopaedias of drugs<sup>6-9</sup>. In their Report on the Review of Flavourings in food, Additives and Contaminants of the Ministry of Agriculture of the United Kingdom (1976), it was stated that mastic is quite safe for use in the food stuffs.

A small number of patients with benign gastric ulcers were treated with mastic extract in a pilot study because gastric ulcer is not common in the Arbil area as only 14 cases (3%) were documented by the authors among 463 patients underwent upper G.I.T. endoscopy during a one year period<sup>10</sup>. Even though a small number of patients were treated with mastic extract, yet the results obtained suggest that mas-

tic may be useful in treating gastric ulcers. However more studies in the form of double blind clinical trials with large numbers of patients are necessary to establish the definite role of mastic in the treatment of benign gastric ulcers.

The mechanism of the action of mastic in relieving symptoms and healing of peptic ulcers is not known. However mastic is not soluble in water<sup>6-8</sup> and therefore it is possible that mastic may form complexes with proteins and produce a cytoprotective layer which protects the gastric mucosa against injurious agents (such as bile salts and peptic acid) and this possible cytoprotective effect of mastic may explain the previous uses of mastic (pigmentum Mastiche Compositum) as a surgical varnish for protective covering of wounds also<sup>9</sup>.

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