

شبكة المعلومات الجامعية





نبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم



جامعة عين شمس

التوثيق الالكتروني والميكروفيلم



نقسم بللله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأفلام قد اعدت دون آية تغيرات



يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار في درجة حرارة من 15 - 20 منوية ورطوبة نسبية من 20- 40 $^{\circ}$

To be kept away from dust in dry cool place of 15 – 25c and relative humidity 20-40 %



ثبيكة المعلومات الجامعية





ثبكة المعلومات الجامعية



بعض الوثائق الأصلية تالفة

Effect of eradication of H. Pylori on Glutathione s— transferase activity in gastritis

Thesis

Submitted for partial Fulfillment of the

Master degree in internal medicine

Presented by

Amir Helmy Samy

M.B.B ch.,

Supervisors

Prof. Dr. Mohamed Abd El Fatah Taha

Professor of internal medicine
Faculty of Medicine, Ain Shams University

Prof. Dr. Laila Saleh Abouda

Assist. Professor of internal medicine
Faculty of Medicine, Ain Shams University

Dr. Azza Emam Mohamed

Lecturer of internal medicine
Faculty of Medicine, Ain Shams University

FACULTY OF MEDICINE AIN SHAMS UNIVERSITY 2002

B

7041



Effect of eradication of H. Pylori on Glutathione s- transferase activity in gastritis

Thesis
Submitted for partial Fulfillment of the
Master degree in internal medicine

Presented by

Amir Helmy Samy

M.B.B ch.,

Supervisors

Prof. Dr. Mohamed Abd El Fatah Taha

Professor of internal medicine Faculty of Medicine, Ain Shams University

Prof. Dr. Laila Saleh Abouda

Assist. Professor of internal medicine

Faculty of Medicine, Ain Shams University

Dr. Azza Emam Mohamed

Lecturer of internal medicine

Faculty of Medicine, Ain Shams University

FACULTY OF MEDICINE AIN SHAMS UNIVERSITY 2002

Contents

| Acknowledgment | 1 |
|---|----|
| Introduction and Aim of work | 2 |
| Literature Review. | |
| Chapter (1): | |
| Helicobacter Pylori . | 2 |
| - Morphology. | 2 |
| - Microbiology. | 2 |
| - Classification. | 3 |
| - Epidemiology. | 5 |
| - Pathogenesis. | 7 |
| - Relation of Helicobacter pylori to gastrointestinal diseases. | 10 |
| - Relation of Helicobacter pylori to systemic diseases. | 16 |
| - Methods of diagnosis. | 17 |
| - Treatment . | 21 |
| Chapter (2): | |
| Antioxidants in Gastrointestinal Diseases. | 25 |
| - Biology of reactive oxygen intermediates | 25 |
| - Antioxidant system. | 27 |
| - Interactions among antioxidants. | 33 |
| - Gastrointestinal diseases and antioxidants. | 34 |
| Materials and Methods. | 44 |
| Results. | 52 |
| Discussion. | 83 |
| Summary. | 87 |
| References. | 89 |
| Arabic Summary. | |

Acknowledgment

First and foremost thanks to God

I wish to express my deep appreciation and profound gratitude to **Prof. Dr. MOHAMED ABD EL FATAH TAHA**, Prof. of Internal Medicine and Gastroentrology, Faculty of Medicine, Ain Shams University for his kind assistance, supervision, continuous encouragement and for being kind enough to follow closely every step in the whole work.

Special thanks to Dr. LAILA SALEH ABOUDA Assistant Prof. of Internal Medicine, Faculty of Medicine, Ain Shams University, for her great effort, precious guidance., and help in all research steps.

With great pleasure, offering too much greetings to the active, faithful guide for **Dr. AZZA EMAM MOHAMED**, Lecturer of internal medicine, Faculty of Medicine, Ain Shams University for her advice and directions during the whole study..

I wish to acknowledge with deep appreciation the help I received From **Dr. MANAL FAWZYI GADALLA.** Assistant prof.of pathology, Faculty of Medicine, Ain Shams University.

I would like to thank my family for their continous encouragement and support that made this work easier to accomplish.

Amir Helmy 2002

Introduction

Helicobacter pylori is one of the most common chronic infections known, and has a world wide distribution, with seven out of ten people – infected globally (Dixon, 1996)

H. pylori is probably the most common cause of chronic gastritis world – wide, it corresponds to the previous type B gastritis (Meining et al ., 1997).

A role of free radicals has been suggested in the development of gastric mucosal damage in H. pylori infection (Canturk et al., 2000).

It was proved that H. pylori induces synthesis of free radicals, diminished levels of reduced glutathione (GSH), DNA fragmentation, increased DNA synthesis in gastric cells and fall in ATP levels with death of gastric cells (Davies et al., 1994).

Glutathione plays a role in gastric mucosal protection, it is a natural antioxidant, it acts as a buffer for prevention of oxidative damage, removal of hydroperoxides, transport of amino acids, stabilization of cell membranes and detoxification of xenobiotics (Meister and Anderson et al., 1993).

Glutathione is abundantly distributed in the mucosal cells of gastrointestinal tract, the detoxifiying capability of glutathione is directly related to its thiol group and to its function as a substrate for enzymatic activity. In fact glutathione regulates the action of glutathione s-transferase and peroxidase (Ketterer et al., 1986).

Glutathione s-transferase catalyze the conjugation of Glutathione with the various endogenous and exogenous harmful compound into a less toxic compound and enable their secretion (De Bruin et al., 2000).

Aim of the study:

To assess glutathione s-transferase activity in cases of gastritis with and without H.pylori infection and effect of eradication of H. pylori on its activity.