شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومـــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـسـم ﴾

نقسم بالله 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 مئوية ورطوبة نسبية من 20-40 %

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

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

STUDY OF APOPTOSIS AND Ki-67 PROLIFERATIVE ANTIGEN IN CHRONIC GASTRITIS, HELICOBACTER AND NON- HELICOBACTER TYPES

Thesis Submitted for Partial Fulfillment of (M.Sc.) Degree in Pathology

Submitted By

AMAL AHMED MOHAMED HAREEDY

(M.B.B.CH)

Faculty Of Medicine- Cairo University

Under Supervision Of

DR. ALI AHMED FOAD EL-HINDAWI

Professor of Pathology, Faculty of Medicine,

Cairo University

DR. MONA ANWAR ABDEL HAMID

Professor of Pathology, Faculty of Medicine,

Cairo University

DR. SAWSAN ABDEL MONIUM FADDA

Assistant Professor of Pathology, Faculty of Medicine,

Cairo University

Faculty of Medicine

Cairo University

2001

جامعة القاهرة / كلية الطب
القصر العيني

محضر

أجتماع لجنة الحكم على الرسالة المقدمة من
الطبيبة/ أمل أحمد محمد حسين
توطئة للحصول على درجة الماجستير / الدكتوراة
في الباثولوجيا

عنوان الرسالة : باللغة الانجليزية : Study of apoptosis and Ki-67 proliferative antigen in chronic gastritis, Helicobacter and non-Helicobacter types

: باللغة العربية : دراسة موت الخلايا المبرمج والانتشار المتزايد كما في Ki 67 في حالات التهاب المعدة المزمن الجرثومي وغير الجرثومي

بناء على موافقة الجامعة بتاريخ ٢٠ / ٢ / ٢٠٠١ تم تشكيل لجنة الفحص والمناقشة للرسالة المذكورة أعلاه على النحو التالي :-

١) أ.د. على أشرف فؤاد الهندي أستاذ الباثولوجيا بطنطا ممتحن من الخارج
٢) أ.د. فتحية محمد حبيب أستاذ الباثولوجيا بكلية الطب ممتحن داخلي
٣) أ.د. عبد الله محمد غانم أستاذ الباثولوجيا بكلية الطب ممتحن خارجي

وقد فحص الرسالة بواسطة كل منهم منفردا وكتابة تقارير منفردة لكل منهم إنعقدت اللجنة بجلسة علنية في يوم الثلاثاء بتاريخ ٣ / ٤ / ٢٠٠١ بقسم الباثولوجيا بكلية الطب – جامعة القاهرة وذلك لمناقشة الطالب في جلسة علنية في موضوع الرسالة والنتائج التي توصل إليها وكذلك الأسس العلمية التي قام عليها البحث .

قرار اللجنة : قررت اللجنة قبول الرسالة تمنح لصاحبها الدرجة العلمية

توقيعات أعضاء اللجنة :-

الممتحن الخارجي	الممتحن الداخلي	المشرف الممتحن
.....	.....	.....
		(صلم)

ACKNOWLEGEMENT

First of all thanks to God, the most beneficient and merciful.

Then, I would like to express my deep appreciation and profound gratitude to PRO. DR. ALI EL-HINDAWI, Professor of Pathology, Faculty of Medicine, Cairo University, for his highly valuable supervision, and constructive instructions throughout this research. His remarks, criticism and great experience in this field specifically and in pathology generally have added much to my knowledge.

I would like to express my sincere gratitude to PRO. DR. MONA ANWAR, Professor of Pathology, Faculty of Medicine, Cairo University, for her generous supervision, valuable suggestion, and keen interest throughout this work.

I am very much indebted to PRO. DR SAWSAN FADDA, Assistant Professor of Pathology, Faculty of Medicine, Cairo University, for her kind supervision, valuable advices, constructive criticism and indispensible help, both in selecting the subject and every step to complete this work.

I would like to express my appreciation and great thanks to PRO. DR. SAMIA ABD-ELRAZIK, Professor of Pathology,

Faculty of Medicine, Cairo University, for her kind cooperation, sincere help and valuable advices.

I gratfully acknowledge PRO. DR. MAHA MAHMOUD AKL, Professor and head of Pathology Department, Theodor Bilharz Research Institute, for her utmost help.

My special thanks to DR. SAHAR TALAAT, Lecturer of Pathology, Faculty of Medicine, Cairo University for her help and encouragement.

I am very much heartly indebted to DR. OLFAT ALI HAMMAM, Lecturer of Pathology, Theodor Bilharz, Research Institute for her sincere effort to complete the practical part.

Finally, I extend my thanks to include all members of Pathology Department, Faculty of Medicine, Cairo University. To my family all may thanks love go.

Abstract

Since the isolation of *Helicobacter pylori* by Warren and Marshall in 1983, much evidence has accumulated to show its important role in the pathogenesis of chronic gastritis, peptic ulcer and its possible role in gastric cancer. During the multistep process of carcinogenesis, the regulation of cell proliferation and apoptosis are disturbed mostly, with enhanced cell turnover.

The present study included 43 cases of endoscopic gastric biopsies, collected randomly and diagnosed as chronic gastritis. Twenty eight (65.12%) of them were *H.pylori* positive and 15 (34.88%) were negative for the organism, moreover 5normal gastric biopsies were encountered as controls. The following stains were used; H&E, Giemsa and Alcian blue PAS at pH 2.5 for the graded and ungraded variables of the updated Sydney System. In addition Feulgen nucleal reaction and ki-67 monoclonal antibody for detection of apoptotic events and proliferating cells respectively.

It was found that, activity, lymphoid follicles and surface epithelial damage were statistically significant higher in *H.pylori* cases than non *H.pylori* group. In cell turnover, while the three indices (PI%, AI% and A/P ratio) were statistically significant different in both groups of gastritides compared to those of the controls, no significant difference was detected between each other. The three indices were significantly correlated with the grade of chronic inflammation and activity in both *H.pylori* and non *H.pylori* cases, while atrophy and intestinal metaplasia it was not so.

Conclusion:- Inflammatory cellular infiltrate may have a role in gastric carcinogenesis through enhanced cell turnover in *H.pylori* chronic gastritis.

Key words: - Chronic gastritis- H.pylori- Ki-67- Proliferation index%- Apoptotic index %- Apoptosis / proliferation ratio.

PAGE

1 ..

3 ...

4 ..

6

11

21

30 .

36 ..

39 .

70 .

103 ..

116 ..

130 .

169 ..

173 ..

175 ..

179 ..

..

Faculty of Medicine

Cairo University

2001

CONTENTS

	PAGE
INTRODUCTION	1
AIM OF THE WORK	3
REVIEW OF LITERATURE	4
▫ Histology of the stomach	4
▫ Cell kinetics and cellular proliferation	11
▫ Assessment of cell proliferation	21
▫ Ki-67 monoclonal antibody	30
▫ Apoptosis	36
▫ Helicobacter pylori	53
▫ Chronic gastritis	70
MATERIAL AND METHODS	103
RESULTS	110
DISCUSSION	155
SUMMARY	169
CONCLUSIONS	172
RECOMMENDATIONS	173
REFERENCES	174
ARABIC SUMMARY	