

بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
على هذه الأفلام قد أعدت دون أية تغييرات



## يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of  
15-25- c and relative humidity 20-40%





# شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



# بالرسالة صفحات لم ترد بالاصل

**Clinicopathological Study of Benign  
Steatosis and non Alcoholic steatohepatitis**

Submitted for partial fulfillment of Master Degree in  
Tropical Medicine

By:

**Hatem Khalil Anwar**

M.B.B.ch.

Under supervision of

**Dr Ahmed Abdel-Atif Abu madian**

Professor of Tropical Medicine, Cairo University

**Dr Sohier Zakaria**

Professor of Tropical Medicine, Cairo University

**Dr Maha Akl**

Professor of Pathology,  
Theodor Bilharz Research Institute

**Cairo University**

**2001**



محضر

اجتماع لجنة الحكم على الرسالة المقدمة من  
الطبيب / حاتم خليل أنور  
توطئة للحصول على درجة الماجستير / الدكتورة  
في طب الكبد والأمراض

تحت عنوان : باللغة الانجليزية : Clinicopathological study of benign steatosis and nonalcoholic steatohepatitis

: باللغة العربية : دراسة باثولوجية الكلىنيكية للكبد الدهن الحبيبي والالتهابي  
الكبد الدهن الغير كحولي

بناء على موافقة الجامعة بتاريخ ١٠ / ١٠ / ٢٠٠١ تم تشكيل لجنة الفحص والمناقشة للرسالة  
المذكورة أعلاه على النحو التالي :-

- (١) أحمد عبد الحليم أبو صير رئيس اللجنة
  - (٢) محمد عبد الحليم أبو صير نائب الرئيس
  - (٣) محمد عبد الحليم أبو صير أمين اللجنة
- بعد فحص الرسالة بواسطة كل عضو منفردا وكتابة تقارير منفردة لكل منهم لاعدت اللجنة مجتمعة فسي  
يتم الاجتماع بتاريخ ١٠ / ١٠ / ٢٠٠١ في قسم ..... مدون ..... للاجتماعات  
بكلية الطب - جامعة القاهرة وذلك لمناقشة الطالب في جلسة علنية في موضوع الرسالة والنتائج التي توصل  
اليها وكذلك الاسس العلمية التي قام عليها البحث .

قرار اللجنة :

لجنة الحكم على الرسالة  
بمقتضى ما تقدم

توصيات أعضاء اللجنة :-

المشرف المستحسن

.....

(حام)

المستحسن الداخلي

.....

المستحسن الخارجي

.....





## *Abstract*

This study was conducted on 75 cases classified according to serological and histopathological examination into 36 cases with nonalcoholic steatohepatitis, 24 cases benign steatosis and 15 cases HCV. All cases subjected to complete clinical assessment, laboratory investigation and liver biopsy. Our results suggested that benign steatosis is a simple disease characterized by minor alterations in laboratory and histopathological findings whereas nonalcoholic steatohepatitis is more severe disease characterized by more alterations in laboratory and histopathological findings.

Ultrasound examination was of great value in diagnosing hepatic steatosis but liver biopsy remains the definite method for diagnosis.

### **Key words:**

Benign steatosis

Non alcoholic steatohepatitis.

Hepatic steatosis.

HCV.

Ultrasound.

Histopathology.



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





## Acknowledgment

It was an honor and great pleasure to work under the kind supervision of Professor Dr Ahmed Abdel-Latif Abu Madian, The eminent professor of Tropical Medicine, Cairo University. He stood by me, and offered me his expert advice, invaluable experience and great help with fatherly attitude. No words would fulfill the feelings I have towards his continuous support, great encouragement and noble attitude, which I have felt during our work.

Words stand short when they come to express my great appreciation and deepest gratitude to Professor Dr Sohier Zakaria, Professor of Tropical Medicine, Cairo University, for her kind supervision, generous help and invaluable advice. She has given me much of her time and guidance with motherly attitude, and this work would have never come to light without her.

I am greatly indebted and deeply grateful to Professor Dr Maha Akl, Professor of Pathology, Theodor Bilharz Research Institute, for her kind supervision and continuous help throughout the work.

I must express my sincere gratefulness to Dr Ayman Amer, Lecturer of Tropical Medicine, Cairo University, for his care, support, and sincere guidance from the very beginning of this work.

I would like to thank Dr Mohamed Ibrahim, Lecturer of Tropical Medicine, Cairo University, for his enthusiasm and encouragement.

Special thanks goes to Dr Mona Nosser, Lecturer of Pathology, Theodor Bilharz Institute, for her her great effort, dedicated help and valuable advise.

I would like to acknowledge all the staff members of Tropical Medicine Department for their kindness and help.

I am much obliged to Dr Wafaa El Akel and her team for their help and effort.

A very warm thanks are owed to my friends and colleagues in Liver Center and Tropical Medicine Department for continuous encouragement throughout the different stages of this work.

I wish to express my sincere thanks to my family, without their help and support this work could not be completed.

Last, but not least, thanks to the patients, hoping this work will share in alleviate their sufferings.



## Table of Contents

<b>Introduction &amp; aim of the Work .....</b>	<b>1</b>
<b>Review .....</b>	<b>5</b>
<b>Part 1:</b>	
<i>Definition .....</i>	<i>5</i>
<i>Epidemiology .....</i>	<i>7</i>
<i>Etiology of benign steatosis and NASH .....</i>	<i>9</i>
<i>Pathophysiological aspects of benign steatosis .....</i>	<i>15</i>
<i>Pathological turnover in the development of NASH .....</i>	<i>18</i>
<i>Diagnosis of cases of benign steatosis and NASH .....</i>	<i>21</i>
<i>Treatment of benign steatosis and NASH .....</i>	<i>29</i>
<i>Natural history and prognosis of benign steatosis and NASH ....</i>	<i>32</i>
<b>Part 2:</b>	
<i>Relation between virus C and steatosis .....</i>	<i>35</i>
<i>Relation between diabetes mellitus and steatosis .....</i>	<i>38</i>
<i>Relation between drugs and steatosis .....</i>	<i>43</i>
<b>Subjects &amp; Methods .....</b>	<b>46</b>
<b>Results .....</b>	<b>52</b>
<b>Discussion .....</b>	<b>89</b>
<b>Conclusion .....</b>	<b>100</b>
<b>Summary .....</b>	<b>101</b>
<b>Recommendations .....</b>	<b>103</b>
<b>Reference .....</b>	<b>104</b>
<b>Arabic Summary</b>	