

Sudan University of Science and Technology

Collage of Graduate Studies

**Frequency of *H. pylori* Antibodies among Patients with
Gastrointestinal Symptoms Attending Khartoum Teaching
Hospital**

نسبة تردد الأجسام المضادة لبكتريا المعدة الحلزونية لدى المرضى
ذوي الأعراض المعوية المتكررين بمستشفى الخرطوم التعليمي

A dissertation submitted in partial fulfillment of the requirements
of the degree of M.sc. in Medical Laboratory Sciences
(microbiology)

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الآية القرآنية

بسم الله الرحمن الرحيم

قال تعالى

وَيَسْأَلُونَكَ عَنِ الرُّوحِ قُلِ الرُّوحُ مِنْ أَمْرِ رَبِّي {
وَمَا أُوتِيتُمْ مِنَ الْعِلْمِ إِلَّا قَلِيلًا}

صدق الله العظيم

{سورة الإسراء، الآية رقم 85}

Dedication

To my parents.....

Who are the candles that glow to shine my way to success and supported me through continuous encouragement and intimate care.

To my husband.....

Brothers, sweetest sister.....

Who inspired me with trust and confidence.

Acknowledgment

Praise and thanks to Allah, the almighty, who gave me health, knowledge, power and patience to carry out this work.

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Abstract

A total of 90 patients with gastrointestinal symptoms, and who attending Khartoum Teaching Hospital during the period from April to October 2012, were enrolled in this study. Out of them 35 (38.9%) were males and 55 (61.1%) were females, their age ranges from 15-60 years with mean (33.2). The aim of this study was to detect frequency of *Helicobacter pylori* IgM, IgG antibodies, and to determine the relationship between the presence of antibodies and certain factors such as (sex, age and genetic susceptibility).

90 serum specimens were collected from patients, and analysed by ELISA technique.

The results showed that 19 (21.1%), 57 (63.3%) were positive for IgM antibody and IgG respectively, while 15 (16.7%) were positive for both.

Females were more affected than males, high frequency of positive results was observed among 15-30 age groups. Statistical analysis showed that there was insignificant correlation between age, gender, genetic susceptibility and presence of *Helicobacter pylori* antibodies ($P > 0.05$).

الخلاصة

شملت هذه الدراسة 90 مريضاً يعانون من أعراض الجهاز الهضمي في الفترة من أبريل إلى أكتوبر 2012. كان عدد الذكور 35 (38.9%) بينما الإناث 55 (61.1%) ، تتراوح أعمارهم من 15 إلى 60 عاماً ومتوسط أعمارهم 33.2.

وهدفت هذه الدراسة للكشف عن تردد الأجسام المضادة (اي.ج.م) و(اي.ج.ج) لبكتريا المعدة الحلزونية، ومعرفة اذا كان هنالك علاقة بين وجود الأجسام المضادة وبعض العوامل (الجنس، العمر والقابلية الوراثية).

تم جمع 90 عينة مصل من المرضى، وتحليلها بواسطة فحص انزيم مرتبط مناعياً

وأظهرت النتائج أن إيجابية للأجسام المضادة (م) و (ج) كانت علي التوالي 19 (21.1%)، 57 (63.3%) و في حين أن 15 (16.7%) كانت ايجابية لهما معاً

كانت الإناث المصابة أكثر من الذكور، والفئة العمرية الأكثر إصابة هي من 15 إلى 30 عاماً، ولكن أظهر التحليل الإحصائي عدم وجود علاقة ذات دلالة احصائية بين الجنس والعمر والقابلية الوراثية ووجود الأجسام المضادة لبكتريا المعدة الحلزونية (القيمة الاحتمالية أكثر من 0.05).

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Lists of abbreviations

H. pylori: Helicobacter pylori

PCR: Polymerase chain reaction

ELISA: Enzyme linked immune sorbent assay

Cag A: Cytotoxin associated gene A

MALT: Mucosal associated lymphoid tissue

DNA: Deoxy ribonucleic acid

RNA: Ribonucleic acid

CD: Cluster differentiation

Th1: T helper 1

UBT: Urea breath test

TMB: Tetra methyl benzaldehyde

Igs: Immune globulins

ICT: Immune chromatography test

HM-CAP: High molecular mass cell associated protein

Abs: Antibodies

CLO: *Campylobacter* like organism

NPV: Negative predictive value

PPV: Positive predictive value