

**Sudan University of Science and Technology
College Of Graduate Studies**

**Seroprevalence Of Syphilis Among Pregnant
Women In Khartoum, Khartoum North,
Omdurman Cities**

By

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Dedication

This unpretending effort is sincerely
dedicated to

The dawn of my life.....lovely mother

The lantern of my path ... my
regardful father

The anchor of my soul ... fellow
husband

And to all my darlings wherever they are

Praise be to "Allah", originally and at eternity

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Abstract

A prospective study was conducted from March through May (2005), in Khartoum, Omdurman and Khartoum North, in Khartoum State, Sudan. Blood samples from one hundred pregnant women attending different hospitals in Khartoum State, were taken for the purpose of diagnosis of syphilis. The stages of pregnancy varied.

There is an increasing demand for evaluating laboratory serological techniques used in diagnosing syphilis, in terms of accuracy and sensitivity, finding out the most accurate in diagnosing and monitoring the disease through comparisons between them. Among the objectives of this study, attempt to study the relation between syphilis and some risk factors, particularly, history of abortion and the co-existence of genital ulcers.

Screening for Syphilis was performed on the hundred blood samples using three serological techniques; namely, Rapid Plasma Reagin (RPR) test, Rapid Syphilis Test (RST) and Treponema Pallidum Haemagglutination (TPHA) test, according to the principle of antigen – antibody reactions. The results obtained were statistically analyzed.

The specific treponemal antibody was detected in 9% pregnant women using TPHA test. However, the antibody was detected among 9% pregnant women using RPR and 8% using RST.

When chi-square test was used to analyze the data obtained, RPR was shown to be the most sensitive test and RST was the most specific method in the diagnosis of syphilis.

Out of the total hundred pregnant women tested, 4% were in the first trimester, 41% were in the second trimester and 55% were in the third trimester.

The highest percentage of positive results (15%) was obtained among the age group 33 – 38 years. The results obtained showed no significant differences between different age groups examined ($P>0.05$).

The study showed that syphilis significantly ($P<0.05$) increased the risk of abortion and genital ulcer was found to be a significantly confounder for positive result for syphilis ($P<0.05$).

The results obtained in this study concluded the importance of performing serological screening tests during pregnancy for better protection, for prevention of possible transplacental transmission and for avoiding probable repeated abortions. Obviously, further studies using more confirmatory tests are needed for proper diagnosis, treatment and control of syphilis among pregnant women.

أجريت هذه الدراسة التوقعية في مجتمع مدينة الخرطوم خلال الفترة من مارس وحتى مايو 2005. تم في هذه الدراسة أخذ عينات دم من مائة سيدة حامل في مختلف مراحل الحمل، وذلك من مستشفيات مختلفة في ولاية الخرطوم.

هناك حاجة متزايدة لتقييم الطرق المخبرية المتبعة في تشخيص الزهري من حيث الدقة والحساسية، ومقارنتها للوصول إلى أكثرها تخصصاً في تشخيص المرض ومتابعة مراحل شفائه.

من بين أهداف الدراسة أيضاً الربط بين مرض الزهري وبعض عوامل الخطورة كسابقات الإجهاض، أو التزامن مع حالات القرحة التناسلية. تم عمل تحليل مخبري لهذه العينات لمعرفة مدى إصابتها بالزهري وذلك من خلال ثلاثة اختبارات مخبرية هي، اختبار المتفاعل المصلي السريع، اختبار الزهري السريع واختبار التراص الدموي للولبية الشاحبة اعتماداً على مبدأ التفاعلات المصلية بين المستضدات والأجسام المضادة وتم تحليل النتائج احصائياً.

وجدت الدراسة أن نسبة الإصابة بالزهري في العينة قيد الدراسة بلغت 12% باستخدام الاختبار الأول، 9% باستخدام الاختبار الثاني و 9% باستخدام الاختبار الثالث ويعزى ذلك التناقض لاختلاف هذه الاختبارات من حيث الحساسية والتخصصية. عند استخدام مربع كاي، وجد أن اختبار المتفاعل المصلي السريع هو الأكثر حساسية واختبار الزهري السريع هو الأكثر تخصصية في تشخيص المرض.

بين المائة عينه قيد الدراسة يوجد عدد أربعة نساء في الفصل الأول من الحمل , 41 في الفصل الثاني و 55 في الفصل الأخير. معظم هؤلاء النساء تتراوح أعمارهن ما بين 21-26 (39%) بينما تحظى الفئة العمرية ما بين 39-44 بأقل تكرار (3%) كما وجدت الدراسة أن أعلى نسبة إصابة بالمرض 15% تقع في الفئة العمرية ما بين 33-38 لا يلاحظ اختلافا ذا دلالة إحصائية بين فئات العمر المختلفة والإصابة بالمرض ($P > 0.05$).

أظهرت الدراسة وجود علاقة إحصائية بين الإصابة بمرض الزهري وبعض عوامل الخطورة المذكورة، وتحديدًا حدوث حالات الإجهاض والتزامن مع القرحة التناسلية ($P > 0.05$) ويعنى هذا أن مرض الزهري يتسبب في بعض حالات الإجهاض كما أن القرحة التناسلية تعتبر مؤشر لوجود الزهري. خلصت النتائج المتحصل عليها بواسطة هذه الدراسة إلى أهمية إجراء الاختبارات المصلية المسحية أثناء فترة الحمل لضمان الحماية الأفضل ، لمنع الحالات المحتملة لانتقال الزهري عبر المشيمة ولتجنب حالات الإجهاض المتكرر المحتملة. كذلك فمن الواضح أن هناك حاجة لإجراء دراسات أكثر توسعاً باستخدام اختبارات أكثر تأكيدية للوصول إلى التشخيص الأفضل ، العلاج والمكافحة لمرض الزهري في النساء الحوامل.

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CHAPTER ONE

Introduction

CHAPTER TWO

Literature Review

CHAPTER THREE

Materials and Methods

CHAPTER FOUR

Results

CHAPTER FIVE

Discussion