



**Sudan University of Science and Technology**

**College of Graduate Studies**



**Antimicrobial Activity of Tamarind extract against Urinary  
Pathogens isolated from Pregnant Women at Al-Hasahisa  
Women and ObstericsHospital**

**فعالية مستخلص العرديب ضد الجراثيم المسببة لالتهاب المسالك البولية  
والمعزولة من الحوامل بمستشفى الحساخيسا للنساء والتوليد**

A thesis submitted in partial fulfillment for the requirements of M.Sc.  
degree in Medical Laboratory Science (Microbiology)

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# الآية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال تعالى في محكم تنزيله:

(وَلَسَوْفَ يُعْطِيكَ رَبُّكَ فَتَرْضَىٰ)

صدق الله العظيم

سورة الضحى الآية {5}

# **Dedication**

**To my father**

**To my mother**

**To my sisters& brothers**

**For their kindness & support**

# Acknowledgment

Firstly all the praise to Allah who guideme to complete this research successfully. Thanks to my supervisor **Dr. Ahmed Ibrahim Hashim** for his guidance and support throughout the research.

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## Abstract

The study was done in Alhasahisa women hospital and obsterics from 11 May to 9 July to determine the most organism causinm urinary tract infection in pregnant women to determine the antimicrobial activity of *T.indicapulp* against the clinical isolates.

The study included 100 samples collected from symptomatic and asymptomatic pregnant women. Sterile urine container was used andmid stream urine samples were collected and processed. The information was taken from the patient by a questionnaire.

The result of this study 72 sample growth and 28 sample no growth. The isolated pathogens were *S.saprophyticus*31% (22/72samples), *S.aureus* 26% (19/72 samples), *E.coli*20%(14/72samples), *S.epidermidis* 11%(8/72samples) *Candida spp* 8%(6/72samples), *Enterococcus feacalis*4%(3/72samples). Out of 72 pregnant women included 49(%86) were asymptomatic and 23 (32%) were symptomatic, 34 (47%) patient had suffering from past infection and 38 (53%) not suffered, the most affected women about 49 (68%) in third trimester, Hb in range 60-70% and most the age of them between 18-28 year and there is no association between the infection and other disease. The majority of the clinical isolates were sensitive to Nitrofurantoin and *T.indica*Pmethanolic, while *Candida spp.* were resistant to the herbal extract. This study confirmed the importance of regular screening of symptomatic and asymptomatic pregnant women for urinary tract infection. This study also highlighted the possibility of using *T.indica*as therapeutic source against urinary isolates after determining the safest effective dose.

## الخلاصة

أجريت هذه الدراسة بمستشفى النساء والتوليد بمدينة الحاصيصا في الفترة من الحادي عشر من شهر مايو الي التاسع من شهر يوليو وذلك لتحديد اكثر الانواع المسببه لإلتهاب المسالك البولية عند الحوامل وتحديد نشاط مستخلص التمر الهندي (العريدب) علي تلك الانواع.

وقد شملت الدراسة علي جمع مائة عينة من البول من الحوامل اللاتي يعانين ولا يعانين من الاصابه بشرط عدم استخدام اي نوع من انواع المضادات الحيوية واخذ بعض البيانات عن طريق الاستبيان وتم اجراء الاختبارات علي العينات للتعرف علي الميكروبات. وكانت نتيجة البحثمو اثنان وسبعون عينة وبينما الثمته والعشرون لم يحدث لها نمو, العثور علي اثنان وعشرون عنقوديه مترممة ( واحد وثلاثون بالمئه), تسعه عشر عنقودية ذهبيه (ست وعشرون بالمئه), اربعة عشر اشريكية قولونية (عشرون بالمئه), ثمانية عنقودية بشروية (احدا عشر بالمئه) سته فطريات (ثمانية بالمئه) وثلاثه مكورات معوية (اربعة بالمئه)

تسع واربعون من الحوامل (ثمانية وستون) لا تعاني من اعراض ثلاثه وعشرون(اثنان وثلاثون بالمئه) فقط تعاني من أعراض المرض , ثمانية وثلاثون (ثلاث وخمسون بالمئه) لا تعاني من اصابه سابقه بالتهاب المسالك البولية بينما تعاني اربعة وثلاثون (سبع واربعون بالمئه) من اصابة سابقة, معظم الاصابات ف فترة الثلث الثالث من الحمل اي الاشهر الاخيره, معظم الحوامل تركيز الهموقلوبين لديهن أقل من سبعون بالمئه في فتره عمر أقل من الثامن والعشرون سنه. عند إجراء إختبار الحساسية الدوائية اظهرت معظم الميكروبات حساسيتها لمضاد النتروفورانتوين وعندما أجريت الحساسيه لمستخلص العريدب أظهر نسبة عاليه من الحساسيه لكل من المعزولات ماعدا عند الفطريات.

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