

**Sudan University of Science and
Technology**

College of A graduate Studies

**In vitro activity of Cephalexin
on Bacterial Urinary Isolates**

By

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requirements of the Master Degree in Clinical
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى

وَفِي أَنْفُسِكُمْ أَفَلَا تُبْصِرُونَ

صدق الله العظيم

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Dedication

To my parents.

Acknowledgements

First of all thanks for Allah that giving me the power and will to complete this study.

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ABSTRACT

This study was carried out in Khartoum State during the period from October 2003 to December 2005. The study was designed to evaluate the activity of cephalexin by using National Committee for Clinical Laboratories Standard (Nccls) modified Kirby-Bauer Disc diffusion technique against urinary isolates. The total numbers of urinary isolates were 140 species. The species were identified as *E. coli* 93 (66.4%), *Klebsiella* spp 20(14.3%), *Proteus* spp. 12(8.6%), *Pseudomonas* spp. 10(7.1%), *Staph. aureus* 3(2.1%) and *Strepto. faecalis* 2 (1.4%).

The results obtained from this study showed that urinary pathogens had high rate of resistant to cephalexin 75 (53.6%), susceptible rate were 34 (24.3%) and 31(22.1%) were intermediate.

The study showed that cephalexin had no activity against *Pseudomonas* spp and was more effective against *Staph. aureus* (100%) and *Strepto. faecalis* (100%).

The rate of resistance among isolates recovered from males was 59.6% and among isolates recovered from females was 49.4%. Susceptibility rate to cephalexin in females was 25.3% being higher than in males 22.8%. Intermediate susceptibility rate in females was 25.3% being higher than in males (17.5%)

ملخص الأطروحة

أجريت هذه الدراسة فى ولاية الخرطوم فى الفترة من أكتوبر عام 2003م وحتى ديسمبر عام 2005م.

صممت هذه الدراسة لتحديد كفاءة المضاد الحيوي سفالكسين بإستخدام طريقة كيربي-بور لعمل اختبارات الحساسية ضد سلالات البكتريا المعزولة من عينات البول.

فى هذه الدراسة تم عزل 140 سلالة بكتيرية كانت كالتى: الاشريشيات القولونية 93 سلالة (66.4%) الكليسات 20 سلالة (14.3%)، المنقليات 12 سلالة (6.8%)، الزوائف 10 (1.7%)، العنقوديات الذهبية 3 (2.1%) والمكورات المعوية 2 (1.4%).

فى هذه الدراسة كان عدد الإناث 123 (61.5%) والذكور كان 77 (43.5%)، عدد الإناث كان أعلى من عدد الذكور.

أوضحت الدراسة إن السلالات المرضية المعزولة من عينات البول كانت ذات مقاومة عالية للسفاليكسين 75 (53.6%) وكان معدل الحساسية 34 (24.3%) ومتوسط معدل الحساسية 31 (22.1%).

كذلك أوضحت الدراسة أن المضاد الحيوى سيفالكسين ليس له تأثير ضد سلالات الزوائف وكان أكثر فعالية ضد سلالات العنقوديات الذهبية (100%) والمكورات المعوية (100%). أن معدل مقاومة السلالات المعزولة من الذكور كان 59.6% و الإناث 49.4%. معدل الحساسية للسيفالكسين فى الإناث كان 25.3% أكثر منه فى الذكور 22.8%، ايضاً متوسط معدل الحساسية فى الإناث كان 21 25.3% أعلى منه فى الذكور 15 (17.5%).

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