

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى

يَرْفَعُ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا
الْعِلْمَ دَرَجَاتٍ وَاللَّهُ بِمَا تَعْمَلُونَ خَبِيرٌ

صدق الله العظيم

سورة المجادلة الآية 11

Dedication

To my parent
To my brothers and
my sister
**To my extended
family**

Acknowledgement

First of all unlimited thanks to ALLAH for giving me strength and power to complete this study, after that I would like to thank my supervisor Dr. Humodi Ahmed Saeed, Dean college of Medical Laboratory Science, Sudan University of Science and Technology for his patience. Then give my great thank to my colleagues in bacteriology department in National Health Laboratory especially Mohammed Abdelrahman “Garja” the senior technologist in bacteriology department for his help and support. Also I thank the staff of Microbiology lab in Sudan University of Science and Technology for their help.

Abstract

This study had been carried out in Khartoum State during period between August 2005 to October 2005. The study evaluate the potency of third generation cephalosporins (Ceftazidime, Ceftraixone, Cefotaxime, cefoprazone) against infection caused by *Pseudomonas aeruginosa*.

Specimens were collected from different hospitals, include Khartoum Teaching hospital 113 (38%), Ear Nose Throat hospital 96 (33%), Military hospital 58 (20%) and National Health laboratory 26 (9%).

Different types of bacteria isolated including *Staphylococcus aureus* 78(28%), *Pseudomonas aeruginosa* 68(24%), *Escherichia coli* 49(18%), *Klebsiella spp* 40 (14%), *Proteus mirabilis* 38(13%), *Citrobacter spp* 5(2%), *Proteus vulgaris* 2(1%).

Pseudomonas aeruginosa, isolates were recovered from infected wound 36/68 (53%), infected ear 24/68(35%), and urine 8/68(12%).

The study showed that ceftazidime was most effective (91%) followed by cefoprazone (47%), ceftriaxone (7%) and cefotaxime (3%).

The results also indicated that the activity of the antibiotics under test against organisms isolated from males and females were 36% and 39% respectively.

ملخص الأطروحة

تم تنفيذ هذه الدراسة في ولاية الخرطوم في الفترة من أغسطس 2005م وحتى أكتوبر 2005م. تناولت الدراسة تقييم فاعلية المجموعة الثالثة من مضادات السفالوس بورينات (سفتازديم، السفتريكس ون، السفوتاكسيم والسفوبيرازون) لعلاج الإلتهابات المسببة بواسطة باكتيريا الزائفة الزنجارية. تم جمع عينات طبية من عدة مستشفيات شملت مستشفى الخرطوم 113 عينة وتمثل 38%، مستشفى الأذن والأنف والحنجرة 96 عينة وتمثل 33% ومستشفى السلاح الطبي 58 عينة وتمثل 20% والمعمل القومي الصحي 26 عينة وتمثل 9%.

تم عزل وتحديد أنواع مختلفة من البكتيريا شملت العنقودية الذهبية 78 سلالة وتمثل 28% والزائفة الزنجارية 68 سلالة وتمثل 24% والإشريكية القولونية 49 سلالة تمثل 18%، أنواع الكلبسيلا 40 سلالة وتمثل 14%، المتقلبة الرائحة 38 سلالة وتمثل 13%، أنواع الستروباكتري 5 سلالات وتمثل 2% وأخيراً المتقلبة الإعتيادية سلالتين وتمثل 1%. مثلت باكتيريا الزائفة الزنجارية المعزولة من مسحات الجروح الملتهبة 36 سلالة (53%)، مسحات الأذان الملتهبة 24 سلالة وتمثل 35%، وعينات البول 8 سلالات وتمثل 12%.

النتائج المستخلصة أثبتت أن السيفتازديم هو أكثر المضادات الحيوية كفاءة (91%) يتبعها السيفوبيرازون (47%)، السيفترايكون (7%) أخيراً السيفوتاكسيم (3%). النتائج أيضاً أشارت إلى أن نشاط المضادات الحيوية تحت الاختبار ضد الميكروب المعزول من الذكور والإناث هي 36% و 39% على التوالي.

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