

Dedication

To the messenger of Allah
Mohammed, Prayer of Allah and
Peace upon him, the first teacher
who gives us the speech.
To my parents for their love and
support.
To all my friends.

Acknowledgement

First of all my thank to Allah for giving me the courage, ability and strength to accomplish this work

I'm deeply indebted to my supervisor Dr. Mogahid Mohamed Elhassan, Head Department of Microbiology, Sudan University of Science and Technology, for facilitating the completion of my research by providing support, advices and encouragement through the course of the study.

Next thank to Dr. Humodi Ahmed Saeed, Dean College of Medicinal Laboratory Science, Sudan University of Science and Technology, for His support and help.

Thanks are also extended to the member of the Tuberculosis Reference Laboratory, National Health Laboratory (Stack), especially Mr. Yassir Tumsah , Mr. Magdi Yahea, Miss Nuha Yousif and Miss Rasha Sayed for providing facilities, help and integration,

Special thanks love go to my parents, sisters and brothers specially "Waleed" and Wigdan for Their financial support throughout the duration of the study.

With love to all

ABSTRACT

Tuberculosis continues to be one of the most prevalent diseases and is the leading cause of mortality from a single disease worldwide. In the developing countries the disease is mainly influenced by poverty while in the developed world it is influenced by AIDS. In Sudan, tuberculosis represents a major health problem.

One hundred sputum samples were collected from suspected pulmonary tuberculosis patients at Al Shaab Teaching Hospital, Abu Anga Hospital and the National Health Laboratory in Khartoum State during the period from November 2008 to May 2009.

In this study, male were found to be more affected than females (67%). All age groups were affected, but with variable degrees, the age at most risk were found to be 21 - 50 years, which comprised (72%) patients. The highest infection rate according to occupation of the patients was found among labours (29%), where as the lowest infection rate was found among unemployed people (7%). The majority of patients came to the above mentioned health institutions from other states. It was found that most of the patients were from Western and Southern Sudan, where the economic and health status are more deteriorated.

Of The 100 sputum samples, 83 gave growth of *Mycobacterium tuberculosis* complex , 10 gave rapid growers and 7 gave no growth.

Isolate of Mycobacterium tuberculosis complex were identified according to their ziehl-Neelsen stain, cultural characteristics and biochemical proprieties.

Lowenstein Jensen proportion method was used to test the antimicrobial sensitivity of the 83 isolates of

Mycobacterium tuberculosis complex against four drugs: Isoniazid (INH), Rifampicin (RIF), Streptomycin (STM) and Ethambutol (ETH), only (36%), isolate were sensitive to the four drugs, (38%) isolates were resistant to INH, (24%) isolates were resistant to RIF, (37%) isolates were resistant to STM and (29%) isolates were resistant to ETH, while (3%) isolates were resistant to INH and RIF, Resistant to INH + RIF + STM (4%) , INH + RIF + ETH (1%) , INH + STM + ETH (2%) , RIF + STM + ETH (1%) . Twenty two (22%) isolates were resistant to the four drugs.

The results obtained from this study revealed the existence of Multi-Drug resistant *Mycobacterium tuberculosis* among Sudanese TB patients thus, clinicians should give more attention for treatment follow up.

ملخص البحث

الدرن هو إحدى الأمراض الواسعة الإنتشار في العالم، وفي الدول الأقل نمواً نجد أن السبب الأساسي هو الفقر، بينما في الدول النامية والمستقرة إقتصادياً نجد أنه يرتبط إرتباطاً وثيقاً بنقص المناعة المكتسب فهو يمثل مشكلة صحية كبيرة في السودان .

تم جمع عدد 100 عينة تفاف من مرضى يشتبه فى إصابتهم بالدرن الرئوي من مستشفى الشعب التعليمي ومستشفى أبو عنجة للأمراض الصدرية والمعمل القومى资料 فى ولاية الخرطوم فى الفترة من نوفمبر 2008 م إلى مارس 2009 م.

فى هذه الدراسة وجد أن عدد الذكور أكثر من عدد الإناث، (67%) كل الفئات العمرية كانت مصابة ولكن بدرجات مختلفة، الفئة العمرية 50-21 سنة كانت أكثر عرضة للإصابة (72%)، إعتماداً على مهن المرضى وجد أن أعلى نسبة إصابة (29%) فى الطبقة العمالية واقلها (7%) بين أفراد الطبقة الغير عاملة. كذلك تبين أن معظم المرضى الذين حضروا إلى المراكز الصحية التي ذكرت أعلاه قد قدموا من ولايات أخرى ومعظمهم من غرب وجنوب السودان ويرجع ذلك للتردى في الوضع الصحي والإقتصادي.

من مجمل 100 عينة عزلت أفراد مجموعة المتفطرة الدرنية، (83%) عينة (10%) عينات متفطرات سريعة النمو، (7%) عينه لم تعطى نمو ميكروبي.

تم التعرف على عزلات مجموعة المتفطرة الدرنية إعتماداً على خصائصها المجهرية، المزرعية والكيموحياتية.

تم إجراء اختبار الحساسية لعدد 83 عزلة من المتفطرة الدرنية للأدوية الأربع: إيزونيازيد، ريفامبيسين، استريلتومايسين، إيثامبيتول فقد عدد (%) 36 عزلة كانت حساسة للأدوية الأربع. عدد (38%) كانت مقاومة للإيزونيازيد، (24%) عزله كانت مقاومة للريفامبيسين (37%) عزلة كانت مقاومة للاستريلتومايسين، (29%) كانت مقاومة للإيثامبيتول، بينما

كانت (3%) مقاومة لعقاري إيزونيازيد وريفامبيسين، وكانت المقاومة للايزونيازيد وريفامبيسين استربتومايسين (4%)، الايزونيازيد وريفامبيسين واثامبيتول (1%) ، ايزونيازيد واستربتومايسين واثامبيتول (2%)، وريفامبيسين واستربتومايسين واثامبيتول (1%) (22%) عزلة كانت مقاومة للعقاقير الأربع.

لخصت هذه الدراسة إلى وجود مقاومة للبكتيريا الرئوية الدرنية لمجموعة من المضادات الحيوية لدى المصابين في السودان لذى يجب على الطبيب المعالج الإهتمام بمتابعة العلاج

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