

**SUDAN UNIVERSITY OF SCIENCE & TECHNOLOGY**

**Collage of Post Graduate Studies**

**Prevalence of Schistosomiasis in Alkreab Village, East Nile Locality,  
Khartoum State**

**شيوع مرض البلهارسيا بقرية الكرياب، محلية شرق النيل ولاية الخرطوم.**

A thesis submitted in partial fulfillment for the requirement of the master degree in  
medical laboratory sciences (parasitology).

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى

لَا يُكَلِّفُ اللَّهُ نَفْسًا إِلَّا وُسْعَهَا ۚ لَهَا مَا كَسَبَتْ وَعَلَيْهَا مَا اكْتَسَبَتْ ۗ رَبَّنَا  
لَا تُؤَاخِذْنَا إِنْ نَسِينَا أَوْ أَخْطَأْنَا ۗ رَبَّنَا وَلَا تَحْمِلْ عَلَيْنَا إَصْرًا كَمَا حَمَلْتَهُ  
عَلَى الَّذِينَ مِنْ قَبْلِنَا ۗ رَبَّنَا وَلَا تُحَمِّلْنَا مَا لَا طَاقَةَ لَنَا بِهِ ۖ وَاعْفُ عَنَّا  
وَاعْفِرْ لَنَا وَارْحَمْنَا ۗ أَنْتَ مَوْلَانَا فَانصُرْنَا عَلَى الْقَوْمِ الْكَافِرِينَ

صدق الله العظيم

سورة البقرة الآية ٢٨٦

## ***Dedication***

***To my:***

***\*Beloved & blessed parents who did every thing for me.***

***\* Dear husband & my daughters.***

***\*Lovely grandfather (Awad) & grandmother (khadija).***

***\* Lovely aunt (Asma).***

***\* Dear brothers & sisters.***

***\* Dear members of my family.***

***\* Wonderful Dr. Miska & Dr. Ibtisam .***

***I dedicate this work***

## ***Acknowledgement***

***The greatest thanks to ALLAH .***

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***Firstly I am most gratefull to my supervisor Dr. Ibtisam Goreish for her expertise, support and endless assessment.***

***Great thanks to Sudan university research laboratory and medical center***

***Lab in Alkreab.***

## ***ABSTRACT***

A cross-sectional study was conducted in Alkreab village, East Nile province from December 2008- January 2009. The study aimed to determine the prevalence of schistosomiasis in the study area. In this study, 86 stool samples (81 from school children and 5 from house wives) and 202 urine samples (145 from school children and 57 from house wives & farmers), were randomly collected, with ages ranging between 5-60 years. The school children were classified to three age groups as (5-9), (10-14) and (15-19) while the farmers and house wives were classified also to three educational levels as (uneducated, with primary education and with secondary education). The stool samples were examined by using kato-katz technique, while the urine samples were examined by ordinary sedimentation concentration technique. The overall prevalence of urinary schistosomiasis (*Schistosoma haematobium*) out of 202 urine samples examined was found to be 21(7.3%) and intestinal schistosomiasis (*Schistosoma mansoni*) out of 86 stools samples examined was found to be zero %. The prevalence of urinary schistosomiasis was found to be highest among school children 18(8.0%). Males are more exposed to infections than females. While the prevalence of urinary schistosomiasis among farmers and house wives were found to be 3 (4.8%). Statistical analysis showed significant associations between the prevalence rate and sex, prevalence rate and age, prevalence rate and occupation, prevalence rate and behaviors of the inhabitants and prevalence rate and swim in Alselate canal.

It was concluded that mass treatment by praziquantel lead to a significant decrease in the disease prevalence as previous studies from the same area revealed higher prevalence.

## ملخص البحث

أجريت هذه الدراسة العرضية في قرية الكرياب، محلية شرق النيل في الفترة من ديسمبر ٢٠٠٨ وحتى يناير ٢٠٠٩. هدفت الدراسة لقياس معدل إنتشار مرض البلهارسيا في المنطقة. في هذه الدراسة جُمعت ٨٦ عينة براز (٨١ من أطفال المدارس و٥ من ربات المنازل) و٢٠٢ عينة بول (١٤٥ من أطفال المدارس و٥٧ من ربات المنازل والمزارعين) عشوائيا. الاشخاص تتراوح أعمارهم ما بين ٥-٦٠ سنة. تم تقسيم أطفال المدارس الى ثلاث فئات عمرية على نحو التالي: (-9، 5)، (10-14) و (١٥-١٩) أما فئة المزارعين وربات المنازل فقد تم تقسيمهم ايضا الى ثلاثة مستويات تعليمية على نحو التالي: (امى، ابتدائى وثانوى). خضعت عينات البراز للفحص بإستعمال تقنية الكاتو كاتز، بينما خضعت عينات البول للفحص بواسطة جهاز الطرد المركزي.

معدل الإنتشار العام (بلهارسيا المجاري البولية) كانت نسبته 7.3%، بعدد 21 عينة إيجابية. وبلغ عدد العينات المفحوصة ٢٠٢ عينة بول وصفر% حيث لم يتم التعرف على عينات إيجابية بالنسبة للمعوية (بلهارسيا المستقيم). وبلغ عدد العينات المفحوصة ٨٦ عينة براز.

بالنسبة لمعدل الإنتشار العام لبلهارسيا المجاري البولية، كانت فئة أطفال المدارس ذات أعلى نسبة إنتشار المرض بعدد ١٨ ونسبة (٨ %) سجلت أعلى نسبة لدي الذكور، مقارنة بالاناث. أما نسبة انتشار المرض لدى فئة المزارعين وربات المنازل فقد كانت بعدد ٣ ونسبة (4.8%) .

وجد التحليل الإحصائي علاقة وثيقة بين إنتشار المرض والجنس، إنتشار المرض والعمر، إنتشار المرض والمهنة، إنتشار المرض وسلوك المجتمع وبين إنتشار المرض وممارسة السباحة فى ترعة السليت.

استنتج بان العلاج الجماعي بالبرازاكونتيل يؤدي الي نقصان في انتشار المرض اعتمادا على دراسات سابقة من المنطقة كشفت معدل انتشار اعلى لمرض البلهارسيا.

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