

الآية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

(وَمِنْ آيَاتِهِ أَنْتَ تَرَى الْأَرْضَ خَاشِعَةً فَإِذَا أَنْزَلْنَا عَلَيْهَا الْمَاءَ
اهْتَرَّتْ وَرَبَتْ ۚ إِنَّ الَّذِي أَحْيَاهَا لَمُحْيِي الْمَوْتَى ۚ إِنَّهُ عَلَىٰ كُلِّ
شَيْءٍ قَدِيرٌ)

صدق الله العظيم

سورة فصلت الآية 39

Dedication

*To my beloved wonderful mother for her measureless support,
encouragement and love over the years.*

*To my precious father, whose wise guidance has made me a good
person.*

*To my lovely husband who always hope to see me the best in
everything.*

*To my beautiful sons (Abdallah, Seereen, Abd alrahman, Sana,
and Sara)*

I dedicate this work

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Abstract

This cross-sectional study was conducted in basic schools in Khartoum state (Khartoum, Bahri and Omdurman) during the period from June to September 2017. The aim of this study was to detect parasitic infections and their associated risk factors in drinking water at basic schools in Khartoum state. One hundred thirty-two water samples were included in this study, 44 samples were collected from each region of Khartoum from different water sources. The study showed that out of 132 samples examined, 56 (42.4%) were positive for parasitic infection. Nine species of intestinal parasites were observed with *Entamoeba histolytica* being the most predominant as it was found in 21 samples (15.9%). From 56 positive samples, 28 (50 %) contained only one pathogenic parasite, 18 (32.1%) contained more than one pathogens and 10 (17.9 %) samples were nonpathogenic. Omdurman city was the most affected region of Khartoum as it contained 26 (59.1%) contaminated samples (P value= 0.010). The frequency of contamination differed according to different water sources, water from the Zeer had the highest degree of contamination (69.7%) followed by water container (50%) and then the other water sources (P. value= 0.012). Only the Zeer harbored all the nine species of water borne parasites. The presence of traditional toilets at schools and toilets without roofs were associated with more contamination of drinking water (57.9%) (61.5%) (P. value=0.022) (P.value=0.028) respectively. No statistically significant differences between Nile and ground water supplement. The study indicated that the frequency of parasitic infections in drinking water at basic schools in Khartoum state was high (42.4%).

مستخلص الدراسة

أجريت هذه الدراسة المستعرضة في مدارس الأساس بولاية الخرطوم (الخرطوم، بحري وأم درمان) خلال الفترة من يونيو وحتى سبتمبر 2017 م. وكان الهدف من هذه الدراسة هو الكشف عن العدوى الطفيلية وعوامل الخطر المرتبطة بها في مياه الشرب في مدارس الأساس بولاية الخرطوم. تضمنت الدراسة 132 عينة مياه، تم جمع 44 عينة من كل منطقة في ولاية الخرطوم من مصادر المياه المختلفة. أظهرت الدراسة أن من بين 132 عينة تم فحصها، 56 (42.4%) كانت إيجابية للعدوى الطفيلية. تم ملاحظة تسعة أنواع مختلفة من الطفيليات المعوية وكان أكثرها انتشاراً هو طفيل الأميبا المحللة للنسيج وجد في 21 (15.9%). من بين 56 عينة إيجابية 28 (50%) كانت تحتوي على نوع واحد فقط من الطفيليات الإمراضية بينما 18 (32.1%) احتوت على أكثر من طفيل إمراضي و 10 (17.9%) من العينات كانت تحتوي على أنواع غير إمراضية. مدينة أم درمان كانت الأكثر انتشاراً إذ أنها احتوت على 26 (56.1%) عينة ملوثة (القيمة المعنوية = 0.010). تردد التلوث في مياه الشرب يختلف باختلاف مصدر المياه، فالمياه المأخوذة من الأزيار سجلت أعلى درجة للتلوث بنسبة (69.7%) تليها المياه المأخوذة من حافظة الشرب بنسبة (50%) تليهما باقي المصادر (القيمة المعنوية = 0.012). الأزيار وحدها التي احتوت على كل التسعة أنواع من الطفيليات المنتقلة عن طريق المياه. وجود الحمامات التقليدية في المدارس والحمامات التي لا تحتوي على أسقف كان مصحوباً بتلوث أعلى في مياه الشرب بنسبة (57.9%) (61.5%) (القيمة المعنوية = 0.022) (القيمة المعنوية = 0.028) على التوالي. لا يوجد أي فارق مقدر إحصائياً بين إمدادات المياه من مياه النيل أو من المياه الجوفية. خلصت الدراسة إلى أن تردد العدوى الطفيلية في مياه الشرب في مدارس الأساس بولاية الخرطوم كان عالياً بنسبة (42.4%).

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