

Sudan University of Science and Technology

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Effect of Schistosmiasis on liver Enzymes

تأثير مرض البلهارسيا على
إنزيمات الكبد

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى

فَبَدَأَ بِأَوْعِيَّتِهِمْ قَبْلَ وِعَاءِ أَخِيهِ ثُمَّ اسْتَخْرَجَهَا مِنْ وِعَاءِ أَخِيهِ كَذَلِكَ كِدْنَا لِيُوسُفَ مَا كَانَ لِيَأْخُذَ أَخَاهُ فِي دِينِ الْمَلِكِ إِلَّا أَنْ يَشَاءَ اللَّهُ تَرْفَعُ دَرَجَاتٍ مَن نَّشَاءُ وَفَوْقَ كُلِّ ذِي عِلْمٍ عَلِيمٌ

صدق الله العظيم

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To my family and all who love

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Abstract

In this study; urine and feces samples were collected from the children of Jable Aolia locality. Microscopically examination for the presence of schistosome eggs were carried out on both samples. Accordingly; the volunteers were divided into two main groups. Control group that contains children negative for both types of bilharsiasis and the target group which contains children found to be positive for bilharsiasis. The latter group is further subdivided into two groups; urinary and intestinal bilharsiasis. Then blood samples were withdrawn from the three groups and liver enzymes were measured using COBAS INTEGRA 400 plus.

When result of liver enzymes for the patients (regardless schistosomiasis type) were compared with the control group; significant variations were observed in ALP, AST and GGT; p values are 0.005, 0.000 and 0.006 respectively. When result of liver enzymes for the patients (two sub groups) were compared with the Heamatobium control group; significant variation was found in ALP results between the control group and heamematobium schistosomiasis p value is equal to 0.039 but no significant variation was observed between control group and mansoni schistosomiasis; p value 0.127 and also no significant variation found between the two types of schistosomiasis; p value 0.906. however no significant variations were found for ALTS result between the control group and heamematobium schistosomiasis, control group and mansoni schistosomiasis, and between the two types of schistosomiasis. P values were 0.814, 0.939 and 0.938 respectively.

For AST, Significant variation were found between the control group and the two types of schistosomiasis, P value was found to be 0.000 between the control group and heamematobium schistosomiasis while p value was found to be 0.009 between control group and mansoni schiosomiasis. No significant variation was observed between the two types of schistosomiasis p value 0.865.

Regarding GGT, Significant variation were found between the control group and heamematobium schistosomiasis p value is equal to 0.001 and significant variation was observed between

control group and mansoni schistosomiasis p value 0.054. And also significant variation was found between the two types of schistosomiasis p value 0.033.

ملخص الدراسة

في هذه الدراسة، تم جمع عينات بول وبراز من أطفال من محلية جبل أولياء واخضعت العينات لفحص مجهري للكشف عن وجود البلهارسيا البولية والمعوية. وتم تقسيم المتطوعين إلى مجموعتين رئيسيتين اعتماداً على نتيجة الفحص. حيث شملت المجموعة الأولى الأطفال غير المصابين بالبلهارسيا في حين احتوت المجموعة الثانية على الأطفال المصابين بالبلهارسيا. ثم تم تقسيم المجموعة الثانية إلى مجموعتين اعتماداً على نوع البلهارسيا. ثم تم تقسيم المجموعة الثانية إلى مجموعتين اعتماداً على نوع البلهارسيا (بولية أو معوية). ثم تم جمع عينات من الدم الوريدي من المجموعات الثلاثة وذلك لقياس مستوى إنزيمات الكبد لدراسة تأثير مرض البلهارسيا على إنزيمات الكبد بواسطة نوعي البلهارسيا.

تم قياس الإنزيمات بواسطة جهاز الكوباس 400.

استخدم برنامج الحزمة الإحصائية للعلوم الاجتماعية للتحليل الإحصائي حيث وجد بين ALP , AST , GGT أن هنالك فروقات معنوية في مستوى إنزيمات الكبد المجموعة المرجعية والمجموعة المصابة بصرف النظر عن نوع البلهارسيا حيث على التوالي P كانت قيم 0.006 , 0.005 , 0.000 .

وعند مقارنة مستوى أنزيمات الكبد اعتماداً على نوع البلهارسيا وجد أن هنالك فرق بين المجموعة المرجعية ومجموعة البلهارسيا البولية ALP معنوي في مستوى AST تساوي 0.039 . وكذلك وجد فرق معنوي في مستوى P حيث كانت قيمة تساوي 0.009 , $P 0.000$ بين المجموعة المرجعية ونوعي البلهارسيا حيث كانت فقد وجدت فروقات معنوية بين المجموعة GGT على التوالي ، أما بالنسبة لإنزيم

تساوي 0.001 والمجموعة المرجعية البلهارسيا P ، المرجعية والبلهارسيا البولية
P تساوي 0.054. وبين نوعي البلهارسيا حيث أن قيمة P المعوية حيث أن قيمة
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Chapter one

Introduction & Literature review

Chapter Two

Objectives

Chapter Three

Materials & Methods

Chapter Four

Results

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