

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال تعالى

(وَيَسْأَلُونَكَ عَنِ الرُّوحِ قُلِ الرُّوحُ مِنْ أَمْرِ رَبِّي وَمَا أُوتِيتُمْ مِنَ الْعِلْمِ إِلَّا قَلِيلًا)

صدق الله العظيم

سورة الإسراء الآية (85)

Dedication

To the soul of my mother

Mohammed

Acknowledgements

All praise and thanks to ALLAH the Almighty, who blessed me with the courage for the preparation and completion of this study. With a great deal of respect I want to thank my supervisor Dr. Tariq Ahmed Hassan Karar, for his skilful guidance, wisdom, and never-ending patience and support. And special thanks to all Doctors and Teachers in the department of Clinical Chemistry of the Sudan University for science and technology faculty of medical laboratory science. Furthermore acknowledge the assistance of all authors listed in the reference list for the literature that I have reviewed. Thanks expressed to all staff of Khartoum and Omdurman hospital for their assistance to make this project complete.

Abstract

A cross sectional study conducted during the period from May to July 2012 to evaluate plasma alanine aminotransferase (ALT), aspartate aminotransferase (AST), total protein and albumin levels in schistosomiasis patients.(70)Sudanese with schistosomiasis were selected as a test group from Al Kemair village (river Nile state) and Omma hani village (white Nile state), Sudan. The test group was compared with a control group which included (50) healthy volunteers. Blood specimens were collected from both groups using lithium heparin anticoagulant and plasma levels ALT and AST, total protein and albumin were determined using enzymatic methods by using Biosystem and Crescent diagnostics commercial kits and by using spectrophotometer . Statistical Package for Social Science (SPSS) version11.5 computer software was used for data analysis.

Results of this study indicated there is insignificant difference between the mean plasma level of ALT, AST and total protein between the test group and control group, there were no difference between the two groups. Plasma level of albumin is significantly decreased after infection of schistosomiasis, and there were significant weak negative correlation between plasma levels of AST and duration of disease, also there is significant weak positive correlation between plasma levels of ALT, total protein and albumin and duration of disease.


In conclusion the present results of this study indicated that the age group of less than 30 years the most affected by schistosomiasis and male affected by schistosomiasis more than female.

المستخلص

أجريت هذه الدراسة المقطعية خلال الفترة من مايو حتى يوليو 2012 لتقويم مستويات الانزيمات الناقلة للامينات، البروتين الكلى و الاليومين في مرضى البلهارسيا، (70) سوداني مصابين بمرض البلهارسيا اختيروا كمجموعه اختبار من قرية الكمير (بولاية نهر النيل) وقرية أم هاني (بولاية النيل الأبيض)، السودان. مجموعة الاختبار قورنت مع مجموعته الضبط والتي شملت (50) متطوعا أصحاء. تم جمع عينات الدم من المجموعتين و تم قياس الانزيمات الناقلة للامينات و البروتين الكلى و الاليومين باستخدام الأساليب الأنزيمية عن طريق مجموعات تجارية من شركتي Biosystem, Crescent diagnostics, و جهاز الطيف الضوئي تم استخدام برامج الحاسوب لتحليل البيانات عن طريق حزمة الطيف الإحصائية للعلوم الاجتماعية SPSS, version 11.5.

وأشارت نتائج هذه الدراسة بأن متوسط مستويات البلازما للانزيمات الناقلة للامينات، والبروتين الكلى لا توجد علاقة ذات دلالة معنوية بين مجموعة الاختبار و مجموعته الضبط (لم يكن هناك اختلاف بين المجموعتين) , و أن متوسط مستويات البلازما للاليومين قد نقص مع الإصابة بالبلهارسيا اى توجد علاقة ذات دلالة معنوية بين مجموعة الاختبار و مجموعته المراقبة (يوجد هناك اختلاف بين المجموعتين), كما اشارت الدراسة لعدم وجود ارتباط ذو دلالة معنوية بين انزيم الالانين الناقل للامينات ؛ البروتين الكلى والاليومين ومدة المرض, كما اشارت الدراسة لوجود ارتباط ذو دلالة معنوية بين انزيم الاسبارتيت الناقل للامينات ومدة المرض. وفي الختام أشارت النتائج الحالية لهذه الدراسة إلى أن الأعمار اقل من 30 سنة هم الأكثر إصابة من الفئات العمرية الأخرى و الذكور متضررين من الإصابة بالبلهارسيا أكثر من الإناث.

Abbreviations

Abbreviation	Full Term
ALT	Alanine Aminotransferase
AST	Aspartate  Aminotransferase
BCG	Bromocrysol Green
B-J	Bence-Jonece protein
CK	Creatine Kinase
DM	Diabetes Mellitus
LFT	Liver Function Test
MDH	Malate Dehydrogenase
NAD	Nicotinamid Adenine Di nucleotide
NIST	National Institute of Standards and Technology
p.value	Probability value
GOT	Glutamic-Oxaloacetic Transaminase
GPT	Glutamic-Pyruvic Transaminase
SLE	Systemic Lupus Erythromatosus

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