

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى

**لَقَدْ أَرْسَلْنَا رُسُلَنَا بِالْبَيِّنَاتِ وَأَنْزَلْنَا مَعَهُمُ الْكِتَابَ وَالْمِيزَانَ لِيَقُومَ
النَّاسُ بِالْقِسْطِ وَأَنْزَلْنَا الْحَدِيدَ فِيهِ بَأْسٌ شَدِيدٌ وَمَنَافِعُ لِلنَّاسِ
وَلِيَعْلَمَ اللَّهُ مَنْ يَنْصُرُهُ وَرُسُلَهُ بِالْغَيْبِ إِنَّ اللَّهَ قَوِيٌّ عَزِيزٌ**

صدق الله العظيم

سورة الحديد الآية 25

Dedication

To the heart of my life, father and
mother

To my kids

To my wife

To my brother and sisters

To my colleagues

I dedicate this work

Acknowledgment

I am grateful to a large number of individuals who have contributed in many ways towards completion of this work.

First and foremost, I offer my tributes and gratitude to my supervisor **Dr. Tariq Elfatih Elmisbah** for initiating the project and for his kind supervision.

Second, my thanks to director of medical affairs and his staff , Halfa Aljadeeda, for their generosity and hospitality. I have to thank them much, since they provided me with many data concerning my research. They, also, helped me much in treating the infected volunteers.

Special thanks to **Mr. Khalifa Jumaa**, medical technologist, who opened his private laboratory where I performed most of my tests.

Many colleagues have enhanced this thesis by reading various chapters and providing helpful critiques in their area of expertise. They include : **Ustaz Mahmood Algari, Ustaz Mohi Adeen Abass**, and **ustaz Sara Ibraheem** from Sudan University of Science and Technology)

Special thanks owed to **Dr. Malik hassan Alfadni**, who provided me with all requirements to achieve this work.

Finally, I wish to express my deep appreciation to **Ustaz Amjad AbdAlkareem, Asaad M. Ahmed**, and **AbdAlla Alharith** who helped me a lot in collection of samples, performing tests, and arrangement of results and final records.

النتائج والناقطة

هذه دراسة وصفية تحليلية اجريت في مدينة حلفا الجديدة في الفترة من ديسمبر 2008 الي فبراير 2009 لتحديد وجود فقر الدم الناتج عن نقص الحديد في مائة شخص 77 من الذكور و 23 من الاناث. تم اختيار المرضى بعد التأكد من اصابتهم بالبلهارسيا المعوية عن طريق فحص البراز وتحديد شدة الاصابة باستخدام تقنية كاتو كاتز.

تم اخذ خمسة ملليمتر من الدم الوريدي من كل مريض، تم وضع 2.5 ملليمتر من الدم في حاوية تحتوي علي مانع التجلط (EDTA) لعمل صورة الدم الكاملة باستخدام جهاز عد الدم (Mythic 18) و 2.5 الباقية في حاوية خالية من مانع التجلط لاستخلاص المصل الدموي لقياس تركيز الحديد و الفريتين. وتم استخدام برنامج الحزم الإحصائية للعلوم الاجتماعية نسخة رقم 13 للتحليل الإحصائي. كانت النتائج علي النحو التالي:

خضاب الدم 13 جرام/100مل ، الدم المكس 40%، متوسط حجم الخلية 78/فيمتوليتير، العد الكلي لكريات الدم الحمراء 5.2×10^{12} /ليتر ، متوسط خضاب الدم في الخلية 25 بيكوجرام ، متوسط خضاب الدم في الخلايا لمكدسة 31جرام/100مل ، العد الكلي لكريات الدم البيضاء 7.4×10^9 /ليتر، العد الكلي للصفائح الدموية 245×10^9 /ليتر، متوسط تركيز الحديد 56 مايكروجرام / 100مل ، متوسط تركيز الفريتين 153 مايكروجرام/ليتر. هذا بالنسبة للذكور .
اما بالنسبة للاناث فكانت كالآتي : خضاب الدم 12 جرام/100مل ، الدم المكس 37%، متوسط حجم الخلية 74/فيمتوليتير، العد الكلي لكريات الدم الحمراء 5×10^{12} /ليتر ، متوسط خضاب الدم في الخلية 23 بيكوجرام ، متوسط خضاب الدم في الخلايا لمكدسة 31جرام/100مل ، العد الكلي لكريات الدم البيضاء 6.7×10^9 /ليتر، العد الكلي للصفائح الدموية 240×10^9 /ليتر، متوسط تركيز الحديد 46 مايكروجرام / 100مل ، متوسط تركيز الفريتين 143 مايكروجرام/ليتر.
اوضحت الدراسة ان هناك انخفاض في معظم القياسات عند المرضى عندما قورنت بمجموعة الضبط كما ان هناك علاقة عكسية معنوية بين شدة الاصابة بمرض البلهارسيا المعوية وكل القياسات ما عدا العد الكلي لكريات الدم الحمراء والبيضاء مما يدل على وجود انيميا نقص الحديد عند المصابين.

Abstract

This descriptive analytic study was carried out in Halfa Aljadeeda town in the period from December 2008 to February 2009 to assess anemia in one hundred *Schistosoma mansoni* infected patients. These patients were selected after detection of *Schistosoma mansoni* eggs in their stool using wet preparation technique. Density of parasitemia was calculated using Kato Katz technique. 5 ml venous blood was drawn from each patient, 2.5 ml placed in EDTA container the remaining poured into plain container from which serum was separated. Anticoagulated blood was used for CBC which was performed using Mythic 18 cell counter, the results were obtained and the mean of each parameter was calculated. They were as followed : Hb:13 g/dl, PCV:40%, MCV:78 fl, RBC: $5.2 \times 10^{12}/L$, MCH: 25pg, MCHC: 31g/dl, TLC: $7.4 \times 10^9/L$, Total Platelet count: $245 \times 10^9/L$, serum iron: 58 μ g/dl and serum ferritin: 153 μ g/l in male group, and Hb: 12g/dl, PCV: 37%, MCV: 74 fl, TRBC: $5 \times 10^{12}/L$, MCH: 23 fl, MCHC: 31g/dl, TLC: 6.7×10^9 , total platelet count: $240 \times 10^9/L$, serum iron: 46 μ g/dl and serum ferritin: 143 μ g/l for female group. The study concluded that there was a reduction in most parameters when compared to control group. There was a significant reverse association between density of parasitemia in all parameters except TLC and TRBC. Decreased blood indices (MCV, MCH, MCHC) and serum iron and serum ferritin indicated iron deficiency.

Abbreviations

CBC	Complete Blood Count
Cm	Centimetre
DNA	Deoxy ribo Nucleic acid
DW	Distilled Water
EDTA	Ethylene Diamine Tetra- Acetic Acid
fL	Femtolitre
G6PD	Glucose 6- Phosphate Dehydrogenase
MCV	Mean Cell Volume
MCH	Mean Cell Haemoglobin
MCHC	Mean Cell Haemoglobin Concentration
mg	Milligram
mmol	Millimole
nm	Nanometer
Pg	Picogram
TLC	Total Leukocyte Count
TRBC	Total Red Blood Cell Count
WBC	White Blood Cell Count
WHO	World Health Organization
UK	United Kingdom

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