Dedication

This humble research is dedicated to my wife Nawal and my children who spared no effort to encourage me to complete this research ,and whom I hope it will be a motive for them to go forward in their education .

Acknowledgements

.I would like hereby to express my gratitude to my supervisor Dr. Mohammed Abdelrahim who has supervised this research and whose patience and constant willingness have largely contributed to completing and presenting this work in it's present from .

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My whole hearted thanks are offered to everyone who has contributed , directly or indirectly to completing this research which I hope I have done satisfactorily.

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Abbreviations

BCG: Bromo – Cresol Green

BMI : Body Mass Index

BUN : Blood Urea Nitrogen

CSF: Cerebra - Spinal Fluid .

DRG : Daily Rate Of Growth

E.D.T.A : Ethylene Diamine Tetra Acetic acid

FAO : Food And Agriculture Organization

HAC : Humanitarian Aid Commit Ion

H.C : Head Circumference

Ht: Height

MBBS: Bachelor Of Medicine And Bachelor Of Surgery

NGOs : None Governmental Organization

NHANESH : National Health And Nutrition

Examination Survey

PCM: Protein- calorie- Malnutrition

PEM : Protein- Energy – Malnutrition

UINESCO: United Nation Education Science Culture Organization

UNICEF : United Nation International Children

TPTZ: tripyridil Triazine

WHO : Word Health Organization

Emergency Funds

Wt: Weight

DECLARATION

The work prescribed in this thesis has been conducted by the undersigned in Omdurman Clinical Laboratory Center Elshuhada and Laboratory C 15 for Children in The Khartoum children's Emergency Hospital

Hereby I declare that :

I did all blood collection and plasma separation .

I performed all clinical investigations .

I also declared that this topic had not been submitted to any other university or research center before for any other degree .

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Abstract

This research focus with the effects of malnutrition on some biochemical factors specially , total protein , albumin , globulins , urea , serum iron and electrolytes in Sudanese children whose age range between two months and six years .

The research has covered 50 children, 40 of them has been already diagnosed as marasmus , kwashiorkor or marasmic kwashiorkor the other 10 children are normally growing children . The research has specifically been conducted for determining the impact of malnutrition on the above mentioned biochemical factors .

The obtained results revealed that there is no difference between the samples and controls except in the serum total iron . Serum potassium and haemoglobin where there is a significant difference between the controls and samples using t. test , where the p value in all cases is less than 0.05.

الخلاصة

هذا البحث يعني بالأثر الذي ينتج عن سوء التغذية علي العوامل الكيميائية بالدم وخاصة نسبة كل من البروتين الكلي, الزلالي , القلوبيولين البولينا , نسبة الحديد الكلية , نسبة الأملاح وخاصة الصوديوم والبوتاسيوم عند الأطفال السودانيين ذوي المدي العمري بين شهرين الي سته سنوات

البحث اشتمل علي خمسين طفل (50) أربعين(40) منهم قد تم تشخيصهم مسبقاً علي انهم أما ذوي نقص حاد في البروتين آو ذوي نقص حاد في النشويات آو ذوي حالات مزدوجة (نقص حاد في كل من النشويات والبروتينيات معاً) إما الأطفال العشرة (10) الباقين فهم أطفال ذوي نمو سوي ولا يشكون من اي أمراض

البحث اجري خصيصاً لمعرفة الأثر الذي يتركه سوء التغذية بأحواله الثلاثة للعوامل الكيماوية التي ذكرت سابقاً .

النتائج :-

النتائج التي تحصلنا عليها أثبتت انه لا يوجد فرق في نسبة هذه المواد بين الأطفال الأسوياء والأطفال المرضي الا في حالة نسبة الحديد الكلية وفي حالة نسبة البوتاسيوم والهموقلوبين وذلك حسب ما ثبت بأجراء اختبار (t.) حيث ان قيمة (P) كانت في هذه الحالات اقل من 0.05