



Oxidative Stress and Zinc Status in Children with β -Thalassemia Major and its Relation to Growth Retardation

Thesis submitted for the fulfillment of Ph.D.
In Medical Childhood Studies
(Child Health and Nutrition)

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2014



اجهاد التأكسد و حالة الزنك في الأطفال مرضى أنيميا البحر المتوسط وعلاقتها بتأخر النمو

رسالة مقدمة للحصول على
درجة دكتوراه الفلسفة في دراسات الطفولة الطبية
(صحة و تغذية الطفل)

مقدمة من الطيبية

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التي منحني الكثير من وقته في التوجيه والإشراف على الرسالة جزاه الله

الله عني وعن أجيال الدارسين الذين تعلموا منها الكثير خير الجزاء



Acknowledgement

Acknowledgments

At first and foremost thanks to "Allah" who gave me the power to finish this work.

*I would like to express my endless gratitude and appreciation to **Prof. Magdy Karam Eldean Ali**, Professor of Preventive Medicine and Epidemiology and Head of Medical Studies Department Institute of Postgraduate Childhood Studies Ain Shams University, for his help and cooperation, which was very essential for this work.*

*I find no words by which I can express my deepest thanks and gratitude to my honored **Prof. Hayam Kamal Nazif**, Professor of Pediatrics, Medical Studies Department, Institute of Postgraduate Childhood Studies, Ain Shams University, for giving me the opportunity to work under their meticulous supervision, honesty assistance and patience make me truly indebted to her.*

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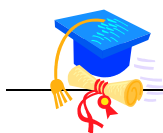
Acknowledgement

*I would like to express my deepest gratitude to **prof. Randa Mahmoud Asaad Matter**, professor of Pediatrics, Faculty of Medicine, Ain Shams University for the continuous kind encouragement, support and guidance, she gave me throughout the entire work. It has been an honor and privilege to work under her generous supervision.*

*My gratitude and thanks to **Prof. Manal Mohamed Abdel Aziz**, Professor of Clinical Pathology, Faculty of Medicine, Ain Shams University, for her help and cooperation, which was very essential for this work.*

To my mother, my dear husband and to every one who participated in a way or another in this work, I owe my thanks and appreciation.

A great deal of my gratitude goes to all patients and their parents wishing them a very rapid and complete permanent recovery.



ABSTRACT

Aim of the present study was to assess oxidative stress and zinc status and its relation to growth retardation in β -thalassemia major patients.

Subjects and methods: Fifty β -thalassemia major patients receiving regular blood transfusion and fifty healthy individuals as a control group were evaluated. Thorough medical history, thorough medical examination and auxological assessment were done. Blood samples for measurement of haemoglobin concentration, serum ferritin, serum ALT, serum zinc and serum Malondialdehyde were obtained.

Results: Showed a significant decrease in serum zinc and a significant increase in serum Malondialdehyde compared to control subjects with a significant negative correlation between both parameters. 50% of patients were below 3rd height centile



Abstract

(short stature) while 0% of controls subjects were below 3rd height percentile. There was a significant positive correlation between serum zinc level and the height percentile and a significant negative correlation between serum Malondialdehyde and height percentile among β -thalassemia major patients.

Conclusion: These data support the assumptions that zinc deficiency might lead to increase in oxidative stress and growth impairment. We suggest zinc administration to reduce the oxidative damage and the related complications in β -thalassemia major patients.



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