بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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Growth Pattern in Juvenile Idiopathic Arthritis in Relation to Insulin Growth Factor-1 and S100A8/9 Protein.

Thesis proposal Submitted for partial fulfillment of PhD in childhood studies

(Child Health and Nutrition)

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2021

Abstract

juvenile idiopathic arthritis (JIA) is a chronic inflammatory disease which affect growth before age of 16 years. The growth hormone (GH)/insulin-like factor-1 (IGF- 1) axis is a main regulator of linear growth, and the major part of circulating IGF-1 levels is liver derived. S100 calcium-binding proteins are associated with acute / chronic inflammatory disorders. The most familiar of S100 proteins is S100A8/A9 (calprotectin). The aim of our study was to evaluate the physical growth pattern in children with JIA. To measure the level of serum IGF-1 and to compare it with healthy controls subjects and also to assess serum S100 A 8/9 protein and its relation to growth pattern and IGF-1.

The study was a case control study which included 40 patients of both sexes with (JIA), their ages will range from 6-10 years. *All patients and controls were subjected to the following:-* Growth Assessment and measure serum (IGF-1) level and S100 A8/9 protein.

There was statistically significant difference between Cases and Controls regarding height-for-age z-score (HAZ), 37.5% of cases were short stature were 10% in controls. There was statistically significant decrease in Weight and BMI among Cases versus Controls. Percentage of underweight of cases were higher among cases versus controls. There was statistically significant decrease in serum Insulin-like growth factor 1 among Cases versus Controls. There was statistically significant increase in S100A8/9 Protein among Cases than Controls. There were statistically significant positive correlation between IGF-1 and height

إِنْ أُرِيدُ إِلاَّ الإِصْلاَحَ مَا اسْتَطَعْتُ وَمَا تَوْفِيقِي إِلاَّ بِاللَّهِ عَلَيْهِ تَوَكَّلْتُ وَإِلَيْهِ أُنِيبُ

صدق الله العظيم

ACKNOWLEDGEMENTS

First and foremost, all praise and all thanks to **ALLAH**, who has guided and enabled me by his mercy to fulfill this thesis which I hope to be beneficial for all.

I would like to express my profound gratitude to *Prof. Dr. Hayam Kamal Nazif,* Professor of Pediatrics Department of Medical Studies for children for her most valuable advises and support all through the whole work and for dedicating much of her precious time to accomplish this work.

I am also grateful to *Prof. Dr. Moushira Erfan Zaki* Professor of Human Genetics , Biological Anthropology Department, Medical Research Division , National Research Centre for her unique effort, considerable help, assistance and knowledge she effored me throughout the performance of this work.

My special thanks to *Prof. Dr. Naglaa Kholoussi,* Professor of Clinical Pathology, Department of Clinical Pathology, National Research Centre for her kind care and great assistance throughout the work.

My special thanks to: Nermin Hassan El gharbawy , Lecturer of Physical Medicine, Rheumatology and Rehabilitation Faculty of Medicine, Ain Shams university. Assem Metwally Abo-Shanab , Immunogenetics department, National Research Centre. Sanaa kamal Mohamed, Professor biological anthropology. Ramy El-Sherbini ,Researcher and lecturer of pediatric and neonatology Biological anthropology department National research centre.

My special thanks to all staff members in Faculty of Postgraduate Childhood Studies Ain Shams Universityfor their cooperation in this work.

My deepest gratitude I extend to my whole family who offered me support, advise and motivation.

Ahmed Mahmoud Zaki Mohamed

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List of Abbreviations

AA	arachidonic acid
ACR	American College of Rheumatology
AD	Alzheimer's disease
AEs	adverse events
ANA	antinuclear antibodies
APP	amyloid precursor protein
AS	ankylosing spondylitis
Aβ	amyloid-β
CALP	Calprotectin or (S100A8/9)
CBC	Complete blood count
cJADAS	clinical JADAS
COPD	chronic obstructive pulmonary disease
COX	cyclooxygenase
CRP	C-reactive protein
CVDs	cardiovascular diseases
DCE-MRI	Dynamic contrast-enhanced MRI
DMARDs	disease-modifying antirheumatic drugs
EIF4EBP1	eukaryotic translation initiation factor 4E-binding protein 1
ELISA	enzyme-linked immunosorbent assay
EPOCA	EPidemiology, treatment and Outcome of Childhood Arthritis
ERA	Enthesitis-related arthritis
FDA	Food and Drug Administration
FOXO	Forkhead Box O
GH	growth hormone
HAZ	height-for-age z-score
HLA	human leukocyte antigen
HRP	Horseradish Peroxidase
HRQoL	health-related quality of life
IAC	Intra-articular corticosteroid
IAV	Influenza A virus
IBD	inflammatory bowel disease
IGF	insulin-like growth factors
IGF1	Insulin-like growth factor 1

IGF-1	insulin growth factor-1
IgM	immunoglobulin
ILAR	International league of Association for Rheumatology
JADAS	Juvenile Arthritis Disease Activity Score
JAMAR	Juvenile Arthritis Multidimensional Assessment Report
JCA	juvenile chronic arthritis
JIA	Juvenile Idiopathic Arthritis
JNK	Jun N-terminal kinase
JPsA	juvenile psoriatic arthritis
JRA	juvenile rheumatoid arthritis
LPS	Lipopolysaccharide
MAS	macrophage activation syndrome
MMP-3	matrix metalloproteinase-3
MRI	magnetic resonance imaging
MRP	myeloid-related protein
MSU	Monosodium urate
MTX	Methotrexate
NO	nitric oxide
N-S	non significant
NSAIDs	Nonsteroidal anti-inflammatory drugs
OD	optical density
PDR	proliferative diabetic retinopathy
PGA	physician's global assessment of disease activity
PMN	polymorphonuclear
PPGA	parent's/patient's assessment of child's well-being
PRCOs	patient-reported or parent-reported outcomes
RF	Rheumatoid factor
rhIGF-1	recombinant human IGF-1
ROS	reactive oxygen species
S	significant
S6K1	S6 kinase 1
SAEs	serious adverse events
sCD163	soluble CD163
SD	Standard deviation
SDS	standard deviation score
sIL-2Rα	serum levels of soluble interleukin-2 receptor α
SLE	systemic lupus erythematosus
SPSS	Statistical Package for Social Sciences

TH	Triamcinolone hexacetonide
TLR	toll-like receptor
TLRs	toll-like receptors
TNF	IL-1 or tumor necrosis factor
VAS	visual analog scale
WAZ	weight-for-age z-score
X2	Chi square test

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