

شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلو

بسم الله الرحمن الرحيم





HANAA ALY



شبكة المعلومات الجامعية التوثيق الإلكتروني والميكرونيله



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



HANAA ALY



شبكة المعلومات الجامعية التوثيق الإلكترونى والميكروفيلم

جامعة عين شمس التوثيق الإلكتروني والميكروفيلم قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها على هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



HANAA ALY



Nail Fold Capillaroscopy in a Cohort of Egyptian Dermatomyositis /Polymyositis Patients

Thesis

Submitted for Partial Fulfillment of Master degree in Rheumatology

By

Gamer Abdelrahman Azrag

(M.B.B.CH)

Leningrad State Medical institute of Hygiene Having Specialized in General Medicine Fellowship of Medicine Sudanese Medical Specialized board (SMSB)

Under Supervision of

Prof. Dr. Howaida Elsayed Mansour

Professor of Internal Medicine and Rheumatology Faculty of Medicine, Ain Shams University

Dr. Shafica Ibrahim Ibrahim

Lecturer of Internal Medicine and Rheumatology Faculty of Medicine, Ain Shams University

Dr. Safaa Abdelsalam Aly Hussein

Lecturer of Internal Medicine and Rheumatology Faculty of Medicine, Ain Shams University

> Faculty of Medicine Ain Shams University 2020



سورة البقرة الآية: ٣٢

Acknowledgment

First and foremost, I feel always indebted to ALLAH, the Most Kind and Most Merciful.

I'd like to express my respectful thanks and profound gratitude to **Prof. Dr. Howaida Elsayed Mansour,**Professor of Internal Medicine and Rheumatology Faculty of Medicine, Ain Shams University for her keen guidance, kind supervision, valuable advice and continuous encouragement, which made possible the completion of this work.

I am also delighted to express my deepest gratitude and thanks to **Dr. Shafica Ibrahim Ibrahim**, Lecturer of Internal Medicine and Rheumatology Faculty of Medicine, Ain Shams University, for her kind care, continuous supervision, valuable instructions, constant help and great assistance throughout this work.

I am deeply thankful to **Dr. Safaa Abdelsalam Aly Hussein**, Lecturer of Internal Medicine and Rheumatology Faculty of Medicine, Ain Shams University, for her great help, active participation and guidance.

Special thanks are due to **Dr. Hanan Ewais Hasan**, Assistant Consultant Rheumatology, Ain Shams University, for her great effort, participation and valuable support.

Gamer Abdelrahman Azrag

List of Contents

Title	Page No.
List of Tables	i
List of Figures	iv
List of Abbreviations	ix
Introduction	1
Aim of the Study	5
Review of Literature	
 Idiopathic Inflammatory Myositis 	6
Nailfold Capillaroscopy	90
Patients and Methods	108
Results	119
Discussion	166
Summary	179
Conclusion	181
Recommendations	182
References	183
Arabic Summary	

List of Tables

Table No.	Title	Page No.
Table (1):	Myositis specific autoantibodies, pre and aasociated clinical feature	
Table (2):	Classification.	60
Table (3):	Bohan and Peter classification crit polymyositis and dermatolmyositis	
Table (4):	Components of the 2017 EUL classification criteria for adult and IIM.	juvenile
Table (5):	Disease activity and damage	75
Table (6):	Final Myositis Intention to Treat A Index score	ctivities
Table (7):	Key characteristics of steroid myopat	thy82
Table (8):	Important capillaroscopic parameters that should be evaluated capillaroscopy	d during
Table (9):	MRC Grading Scale	110
Table (10):	Characteristics of the study pop Categorical variables	
Table (11):	Characteristics of the study pop Numerical variables	
Table (12):	Nailfold Capillaroscopy (NFC) among the studied 20 patients	_
Table (13):	Capillaroscopic findings in patien DM.	
Table (14):	Relation between disease activity so capillaroscopic findings	
Table (15):	Relation between disease subtycapillaroscopic findings	-

List of Tables Cont...

Table No.	Title	Page No.
Table (16):	Relation between Muscle Disease Score and capillaroscopic findings	•
Table (17):	Relation between disease durat capillaroscopic findings	
Table (18):	Relation between Skin Scor capillaroscopic findings	
Table (19):	Relation between CPK leve capillaroscopic findings	
Table (20):	Relation between scleroderma patrdisease duration	
Table (21):	Relation between scleroderma patrdisease activity	
Table (22):	Relation between DM (sclerodern pattern and CPK level	*
Table (23):	Comparison of the three disease s Categorical variables	
Table (24):	Comparison of the three disease s Numerical variables	v -
Table (25):	Relation between disease activity s capillaroscopic findings in ca dematomyositis	ases of
Table (26):	Relation between disease durat capillaroscopic findings in cadematomyositis	ases of
Table (27):	Correlations between Skin Score, Disease Activity Score and Global Activity Score	Disease
Table (28):	Accuracy of enlarged capillar diagnosis of DM(scleroderma like)p	

List of Tables Cont...

Table No.	Title	Page No.
Table (29):	Accuracy of dilated capillaries fo of DM(scleroderma like) pattern	•
Table (30):	Accuracy of giant capillaries for of DM(scleroderma like) pattern	O
Table (31):	Accuracy of tortuous capill diagnosis of DM(scleroderma like)	
Table (32):	Accuracy of branched capil diagnosis of DM(scleroderma like)	
Table (33):	Accuracy of avascular areas for of DM (scleroderma like) pattern	O
Table (34):	Accuracy of disorganized capidiagnosis of DM(scleroderma like)	
Table (35):	Accuracy of hemorrhage for di DM(scleroderma like) pattern	•

List of Figures

Fig. No.	Title	Page No.
Figure (1): Figure (2):	Normal capillaroscopic pattern Heliotrope	
Figure (3):	Gottron papules and nailfold telangare present in this patien dermatomyositis	giectasia t with
Figure (4):	Poikiloderma "V-neck"	
Figure (5):	Scaly scalp with alopecia is commor	n in DM 31
Figure (6):	Overgrown cuticles are seen co multiple hemorrhages	_
Figure (7):	Calcinosis	34
Figure (8):	Clinical features associated antisynthetase syndrome include m hands which present as hyperkeratos arrows) and cracking at the tips of t and along the lateral aspects of the firm	echanic's sis (white he finger
Figure (9):	Examples of MR images	_
Figure (10):	Skeletal Muscle structure (anatomy	
Figure (11):	Dermatomyositis, muscle haematoxylin and eosin staining	biopsy,
Figure (12):	Polymyositis muscle biopsy sp haematoxylin and eosin staining	•
Figure (13):	Muscle biopsy section from a patie inclusion body myositis	
Figure (14):	Subgroups of IIM according to the EULAR/ACR classification criteria.	
Figure (15):	Devices that can be used for capillaroscopy	
Figure (16):	Schematic drawing of the front por nailfold capillary loop	
Figure (17):	The six capillaroscopic parameters .	

Fig. No.	Title	Page No.
Figure (18):	Normal capillaroscopic image shaped capillaries	
Figure (19):	"Early" scleroderma pattern enlarged capillary loops with capillaries loss	out any
Figure (20):	"Active" scleroderma pattern showing hemorrhages and a showing dilated capillary loops)	rrowhead
Figure (21):	"Late" scleroderma pattern with distortion of capillary architecture	n marked
Figure (22):	Proportion of patients with duration ≤6 months or >6 months	disease
Figure (23):	Proportion of patients with derma polymyositis or overlap syndrome	•
Figure (24):	Prevalence of various capill findings in the study population	-
Figure (25):	Proportion of patients with score 1 or score-2 capillary density	123
Figure (26):	Distribution of the Global Disease Score in the study population	•
Figure (27):	This is capillarscopic findings in old female with DM Shows typica in DM with cauliflower appear enlarged and branched capillaries.	l changes trance of
Figure (28):	NFC picture in 61 year old femal shows giant (diameter>50) and capillaries, haemorrhage with loss.	branched capillary
Figure (29):	Normal NFC findings in 33 year patients with PM.	old male

Fig. No.	Title	Page No.
Figure (30):	Hemorrhage and giant capillary in 50 females with amyopathic dermatomyositis activity skin score was 7	the patient
Figure (31):	Mean Global Disease Activity patients with or without branching. Error bars repressandard error. Dots represent is observations.	capillary sent the ndividual
Figure (32):	Proportion of patients with giant c among the three disease subtypes.	-
Figure (33):	Capillary density score in the thresubtypes	
Figure (34):	Proportion of patients with avascuamong the three disease subtypes.	
Figure (35):	Proportion of patients with capill hemorrhage among the three subtypes.	disease
Figure (36):	Relation between Muscle Disease Score and Capillary density Sco bars represent the standard err represent individual observations.	e Activity re. Error ror. Dots
Figure (37):	Mean Skin Score in patients without capillaroscopic hemorrha bars represent the standard errepresent individual observations.	ge. Error ror. Dots
Figure (38):	Prevalence of giant capillaries patients with dermatomyositis polymyositis (PM) or overlap s (OS).	s among s (DM), syndrome

Fig. No.	Title Page No.
Figure (39):	Prevalence of avascular areas among patients with dermatomyositis (DM), polymyositis (PM) or overlap syndrome (OS)
Figure (40):	Capillary density score in patients with dermatomyositis (DM), polymyositis (PM) or overlap syndrome (OS)147
Figure (41):	Number of scleroderma criteria among patients with dermatomyositis (DM), polymyositis (PM) or overlap syndrome (OS)
Figure (42):	Prevalence of scleroderma like (DM) pattern among patients with dermatomyositis (DM), polymyositis (PM) or overlap syndrome (OS)148
Figure (43):	Mean capillary width in patients with dermatomyositis (DM), polymyositis (PM) or overlap syndrome (OS). Error bars represent the standard error. Dots represent individual observations
Figure (44):	Mean disease activity score in dermatomyositis (DM) patients with or without disorganized capillaries. Error bars represent the standard error. Dots represent individual observations
Figure (45):	Scatter plot illustrating the correlation between the Muscle Disease Activity Score and Global Disease Activity Score

Fig. No.	Title	Page No.
Figure (46):	ROC curve for accuracy of c	
Figure (47):	ROC curve for accuracy of for diagnosis of scleroderma PP	pattern, 100%,
Figure (48):	The scleroderma pattern sensitivity (100%) but specif diagnosis of dermatomyositis	n had high icity of 50% for