

شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلو

بسم الله الرحمن الرحيم





MONA MAGHRABY



شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلو



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



MONA MAGHRABY



شبكة المعلومات الجامعية التوثيق الإلكترونى والميكروفيلم

جامعة عين شمس التوثيق الإلكتروني والميكروفيلم قسم

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



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



MONA MAGHRABY

Probiotics versus placebo as a prophylaxis to prevent clinical manifestations of oral candidosis in patient's with Sjogren's syndrome

(Randomised Controlled Trial)

A Thesis
Submitted to the Faculty of Dentistry, Cairo University, for Partial
Fulfillment of the Requirements of the PhD Degree in Oral
Medicine

By: Yasmine Kamal Ramadan

B.D.S., M.Sc.
Assistant Lecturer of Oral Medicine, Faculty of Dentistry, Cairo University.

Department of Oral Medicine and Periodontology Faculty of Dentistry Cairo University 2019

Supervisors

Prof. Dr. Mahmoud Kandil
Professor of Oral Medicine
Faculty of Dentistry
Cairo University

Dr. Mervat Eissa Lecturer of Rheumatology Faculty of Medicine Cairo University

Dr. Reham Hamed
Lecturer of Clinical and Chemical Pathology
Faculty of Medicine
Cairo University

Dr. Basma Abdelalim Zakaria
Lecturer of Oral Medicine
Faculty of Dentistry
Cairo University

بِسْمِ اللهِ الرَّحْمنِ الرَّحِيم

وَمَا أُوتِيتُمْ مِنَ الْعِلْمِ إِلا قَلِيلا

صدَق الله الْعَظِيْم

سورة الاسراء





Dedication & Appreciation TO:

Professor Dr. Khaled El-Gaaly

I'm so much honored and grateful to you for giving us the time and effort for reviewing and evaluating this work hoping that it meets your satisfaction.

THANK YOU





Dedication & Appreciation TO:

Professor Dr. Mohamed Khedr

I'm so much honored and grateful to you for giving us the time and effort for reviewing and evaluating this work hoping that it meets your satisfaction.

THANK YOU

Acknowledgement

First and foremost, I would like to express my greatest gratitude to **ALLAH**, who gave us life, and the gift of thinking to explore the greatness of his creation. May he accept ours good deeds.

I would like to express my sincere appreciation and gratitude to Professor Dr. MAHMOUD KANDIL, Professor of Oral Medicine & Periodontology Department, Cairo University; I will remain grateful for his guidance and precise supervision that helped me all through this work.

I would like to express my appreciation to Lecturer Dr. BASMA ABDELALIM, Lecturer of Oral Medicine& Periodontology Department for her exact, precise, and generous supervision, and continuous guidance.

I would like to express my appreciation to Lecturer Dr. MERVAT EISSA, Lecturer of Rheumatology Department, Cairo University; for her kind assistance, support and guidance that helped me all through this work.

I would like to express my appreciation to Lecturer Dr. REHAM HAMED, lecturer of Clinical and Chemical Pathology Department for her exact, precise, and generous supervision, and continuous guidance.



To my beloved husband Mazen, thank you for your patience, understanding and continuous support.....

To my lovely daughters Malak and Judy, thank you for always bringing joy into my life......

To my great parents, thank you for your faith in me, and teaching me that I should never give up......

To my dear sisters and friends Basma Abdelalim, Eman Magdy, my dear Amira Abd Elwahab & my lovely colleague Ghada Nabil, thank you for being in my life giving me continous support and love.....

Contents

Content	Page
Review of literature	1
Aim of the study	43
Subjects and methods	44
Results	56
Discussion	81
Conclusion	91
Recommendations	92
Summary	93
References	95
Appendix	129
Arabic Summary	139

List of Tables

NO	Headings	Page NO
1	Systemic manifestations in Sjögren Syndrome	7
2	Different means of probiotic administration for oral health	38
	purposes	
3	Baseline raw demographic and clinical data of Group A	59
4	Baseline raw demographic and clinical data of Group B	60
5	Baseline characteristics of the studied groups.	61
6	Repeated measure ANOVA for comparing NRS mean pain	64
	score in different follow up visits in the Probiotic group	
7	Repeated ANOVA for comparing the NRS pain score in	64
	the Placebo group	
8	Comparison between the two studied groups in different	66
	study periods using Student T-test	
9	Percentage of detection of erythema within the same group	68
	and between the two groups	
10	Results of chi-square test to compare the appearance of	69
	erythema between the two groups	
11	Results of Wilcoxon Signed Ranks Test comparing the	70
	cansidal load at 5 w and at 0 day in both groups	
	Results of Mann-Whitney U Test comparing the	72
12	candidal load change between the two groups	
13	Spearman's correlation between candida load change	73
	(CFU/ml) and pain change	

List of Figures

No	Headings	Page no
1	A summary of the steps performed in this study	45
2	The probiotic complex container with its active	49
	ingredients	
3	Two opaque containers A&B with no difference	50
	between them where A contains the probiotic capsules	
	and B contains the placebo capsules	
4	The probiotic capsule and the prepared placebo capsule	50
	sharing the same size, shape and color.	
5	The bottle containing the phosphate buffered saline	51
	used for oral rinse technique	
6	A 10ml solution containing candidal load of a patient	51
	collected by oral rinse solution technique.	
7	A saboraud dextrose agar plate before being cultured	52
8	A saboraud dextrose agar plate cultured with candida	52
9	The incubator in which the candidal culture is	52
	incubated at 37oC for 48 h.	
10	Flow chart of patient enrolment and analysis	57
11	A bar chart representing the mean age in both studied	61
	groups	
12	Bar chart representing the 1ry to 2ry SS ratio in both	62
	groups	

13	Bar chart showing showing the mean of pain score within the probiotic group in different study periods	65
14	Bar chart showing the mean of pain score within the placebogroup in different study periods	65
15	Bar chart showing comparison between the mean pain score in both groups	67
16	Bar chart comparing the appearance of erythema between the two groups	69
17	Bar chart showing comparison between the median candida load in CFU/ml before and after treatment in probiotic group	71
18	Bar chart showing comparison between the median candida load in CFU/ml before and after treatment in placebo group	71
19	Bar chart showing comparison between the median candida load change (CFU/ml) in the two study groups after treatment	73
20	Clinical photographs of a 29 yrs old female patient with 1ry Sjogren's syndrome (A) before using probiotics and (B) after using it.	74
21	Candidal culture of the same patient, (A) before using probiotics and (B) showing no growth at all after 5weeks.	74
22	Clinical photographs of a 40 yrs old female patient with 2ry Sjogren's syndrome.(A)before using probiotics and (B) after using it.	75

23	Candidal culture of the same patient . (A) before using	75
	probiotics showing high candidal count and (B)	
	showing less candidal count after 5 weeks.	
24	Clinical photographs of a 50 yrs old female patient	7 6
	with 1ry Sjogren's syndrome . (A) before using	
	probiotics and (B) after using it	
25	Candidal culture of the same patient . (A) before using	76
	probiotics showing high candidal count and (B)	
	showing less candidal count after 5weeks	
26	Clinical photographs of a 34 yrs old female patient	77
	with 1ry Sjogren's syndrome in the control group . (A)	
	before using placebo and (B) after using it.	
27	Candidal culture of the same patient . (A) showing	77
	candidal count before using the placebo and (B)	
	showing higher growth after 5weeks from using	
	placebo capsules.	
28	Clinical photographs of a 52 yrs old female patient	78
	with 2ry Sjogren's syndrome in the control group . (A)	
	before using placebo and (B) after using it	
29	Candidal culture of the same patient . (A) showing	78
	candidal count before using the placebo and (B)	
	showing higher growth after 5weeks.	
30	Clinical photographs of a 32 yrs old female patient	79
	with 2ry Sjogren's syndrome in the control group . (A)	
	before using placebo and (B) after using it.	
	from using placebo capsules.	
L	I .	