THE POSSIBLE HEALING EFFECT OF PROLOTHERAPY IN TREATMENT OF KNEE OSTEOARTHRITIS

Protocol of a thesis submitted for partial fulfillment of the requirements of the MD degree in Physical Medicine, Rheumatology and Rehabilitation

INTRODUCED BY

Dina Mohamed Ibrahim Soliman

M.B., B.CH. (honor degree),
M.Sc. Physical Medicine, Rheumatology and Rehabilitation
Faculty of Medicine, Ain Shams University

UNDER SUPERVISION OF

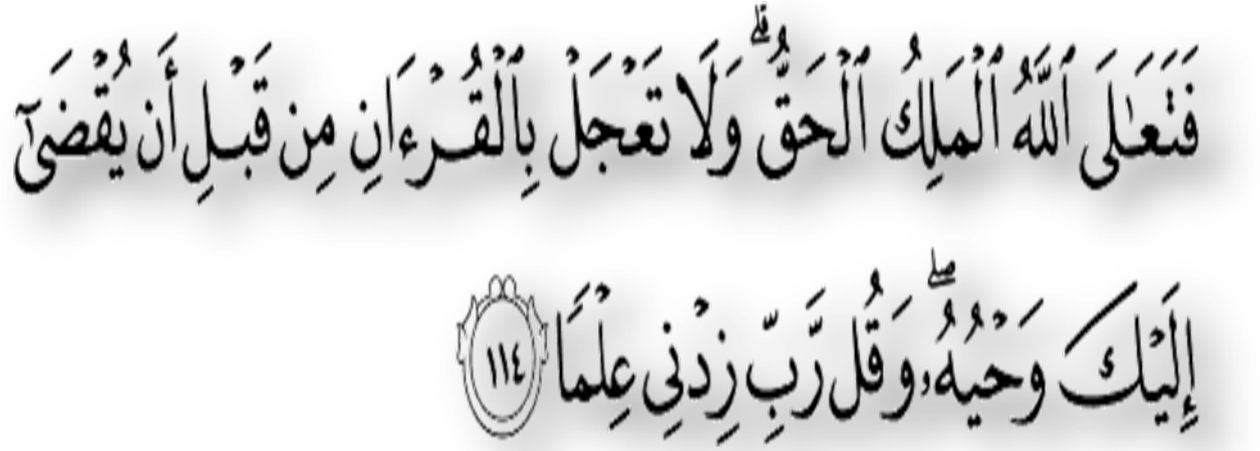
Professor Doctor Nahed Mounir Sherif
Professor and Head of the Department of Physical Medicine, Rheumatology and Rehabilitation
Faculty of Medicine, Ain Shams University

Professor Doctor Omar Hussein Omar
Professor of Radiology
Faculty of Medicine, Ain Shams University

Assistant Professor Doctor Abeer Ahmed Kadry El-Zohiery
Assistant Professor of Physical Medicine, Rheumatology and Rehabilitation
Faculty of Medicine, Ain Shams University

Faculty of Medicine, Ain Shams university
Cairo, Egypt 2014

بسم الله الرحمن الرحيم



صدق الله العظيم

{ سورة طه } الجزء السادس عشر

The Healing Effects of Prolotherapy in Treatment of Knee Osteoarthritis

Nahed Mounir Sherif*, Omar Hussein Omar, Abeer K .El Zohiery* & Dina Soliman***

**Department of Physical Medicine, Rheumatology and Rehabilitation, Ain Shams University.*
***Department of Radiology, Ain Shams University.*
Cairo, Egypt.

CORRESPONDING AUTHOR Dina Mohamed Ibrahim Soliman, M.B., B.CH. (honor degree), M.Sc. Physical Medicine, Rheumatology and Rehabilitation. Faculty of Medicine, Ain Shams University.
Member of American Association of Orthopedic Medicine "AAOM".
dr.dinasoliman@gamil.com

ABSTRACT

PURPOSE Knee Osteoarthritis is one of the most common causes of musculoskeletal pain and disability affecting millions of people worldwide ,with no solitary effective line of treatment . Prolotherapy is a proposed injection therapy for chronic musculoskeletal pain. The aim of our study is to assess the efficacy of prolotherapy for knee osteoarthritis.

METHODS One hundred and twenty eight adults with knee OA, adjusted for gender and age, were enrolled in the study . One hundred and four were subjected to dextrose prolotherapy (group "I") and twenty four received physiotherapy treatment (group "II"). Post-procedure application of hot packs and use of acetaminophen medication in order to decrease the post injections pain. Patients were assessed clinically, functionally and radiologically at the beginning and at the end of the study (12 months).

RESULTS Group "I" patients reported at month 12 a clinical improvement, knee pain improvement (VAS), knee function improvement (WOMAC scores) and radiological improvement (plain x-rays and musculoskeletal ultrasound), compared with baseline status ($P \leq 0.001$) and compared to group "II".

CONCLUSIONS Prolotherapy resulted in clinically meaningful sustained improvement, knee function improvement as well as a radiological improvement for knee osteoarthritis compared with physiotherapy.

Key Words Prolotherapy, knee osteoarthritis, ligaments and tendons, neural prolotherapy, musculoskeletal ultrasound, knee plain x-rays.

TO MY FAMILY

TO MY BELOVED HUSBAND

FOR THEIR CONTINUOUS HELP

AND SUPPORT THROUGHOUT

ALL THESE YEARS…

TO THE SOUL OF MY GREAT

INSTRUCTOR PROFESSOR

DOCTOR JEFFERY PATTERSON

I DEDICATE THIS WORK…

Acknowledgement

FIRST OF ALL, I WOULD LIKE TO START BY THANKING GOD, THE MOST BENEFICENT AND THE MOST MERCIFUL FOR HIS MANY BLESSINGS THROUGHOUT MY LIFE AND THROUGH WHOM EVERYTHING IS POSSIBLE.

I would like to gratefully and sincerely thank the Head of the Department, my advisor Prof. Dr. Nahed Mounir Sherif. Words are not enough to express my deepest love and gratitude for her support, understanding and patience. She devoted lots of her time to get this work done. For everything you've done for me, Dr. Nahed, I thank you.

I am greatly indebted to my advisor Prof. Dr. Omar Hussein Omar, for his assistance, teaching and guidance in getting my first musculoskeletal ultrasound experience started on the right foot and providing me with precious knowledge in this field. He was a great person who devoted much of his time, effort and experience in supervising and achieving this

work. It is a honor to work with such a person who is willing to give and guide his students.

In particular, I would like to thank my advisor Assistant Prof. Dr. Abeer Ahmed Kadry El-Zohiery. Because of her, I searched for a new treatment to apply in my thesis and thanks GOD, I did and God gave me the chance of learning and adding to my career the prolotherapy which is the revolution in the new era of the myofascial treatment. Her great effort and continuous help, her cordial encouragement and generous support made easier everything throughout this work. I really would like to thank her for her helpful and meticulous suggestions and guidance. Her creative comments made completion of this work possible and made this thesis appear in such a period of time. Simply, she is a great and un-comparable person. Dr. Abeer, God bless you.

I am grateful with all my life to Prof. Dr. Jeffery Patterson, Professor of Family Medicine, Wisconson Madison Univerisity and President of Hackett-Hemwall Fundation, for his mentorship which was paramount in

providing me a well rounded experience consistent with my life long-term career goals. I am extremely grateful to my instructor who changed my life career by teaching me the art of prolotherapy.

I am extremely grateful to Prof. Dr. John Lyftogt, who spend many hours in teaching me the new art and the coming wave which will change the world "the Neural Prolotherapy".

I am very grateful to Prof. Dr. David Rabago, Professor of Family Medicine, Wisconson Madison University, and to Prof. Dr. Dean Reeves, Clinical Associate Professor, Department of Physical Medicine, Rheumatology and Rehabilitation, Kansas University, as I was surrounded by their generous care, guidance, supervision and advises throughout this work.

I am extremely grateful to Prof. Dr. Andrew Kochan and to all the Board members and Professors of the American Association of Orthopedic Medicine for everything they have given me. They have taught me a lot for my future career and they have shared with me a lot of their experiences.

Additionally, I am very thankful to all the staff members of Misr Radiology Center for their help and cooperation.

I would like to express my deepest love and gratitude to my GREATEST FATHER, for everything he has done for me through all my life. His efforts in helping me with my presentation made it appear in such a perfect way.

Most importantly, I would like to express all my love and to extend many heartfelt thanks to my dear parents for their love, care, guidance, help and support without which, achievement of this work would have been impossible, and for their encouragement throughout my life without which, I would never have became me. Their faith in me allowed me to be as ambitious as I wanted. It was under their watchful eye that I gained so much drive and an ability to tackle challenges head on.

I would like also to thank my husband Mohamed, my daughter Farida and my son Yassin for their support, encouragement, quiet patience, unyielding devotion and

unwavering love which were undeniably the bedrock upon which the past years of my life have been built.

Last but not least, I would like to thank all the members of the Physical Medicine, Rheumatology and Rehabilitation Department, Faculty of Medicine, Ain Shams University, for their fellowship, help and cooperation.

THANK YOU ALL

DINA SOLIMAN

TABLE OF CONTENTS

CHAPTER THREE

CHAPTER FOUR

CHAPTER FIVE

CHAPTER SIX

CHAPTER SEVEN