بسم الله الرحمن الرحيم

" و قل رب زدنى علما "

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EFFECT OF DECLOPHENAC PHONOPHORESIS VERSUS LOW LEVEL LASER THERAPY ON OSTEOARTHRITIS KNEE

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EFFECT OF DECLOPHENAC PHONOPHORESIS VERSUS LOW LEVEL LASER THERAPY ON OSTEOARTHRITIES KNEE / Alaa Abo-Srie Amin. Supervisors; Prof. Dr. Mohamed El-Gendy, Dr.Azza Mohamed Ateya, Basic Science Department, Faculty of Physical Therapy, Cairo University and Prof. Dr. Mohamed El Sayed Shabana, Consultant of Orthopedic surgery, Al Agouza hospital. Fac.of phys.ther-Thesis; M.Sc., Basic Science department; 2009.

Abstract

Background: Osteoarthritis of the knee is reported to be a major health problem worldwide. **Purposes:** To compare between the declophenac phonophoresis and low level laser therapy in the treatment of knee osteoarthritis. **Study Design:** A pre test post test design. **Materials and methods:** thirty patients with knee osteoarthritis from both genders were selected, aged between 40– 60 years. They were divided into two equal groups, fifteen patients each. Patients in the first group received declophenac phonophoresis in addition to traditional exercise program in the form of stretching and strengthening exercises. Patients in the second group received laser therapy in addition to the same traditional exercise program. The program was done 3 times a week for 4 weeks. Pain level, Range of motion of the knee joint and functional performance were measured before and after treatment. **Results:** there were significant differences within the two groups before and after treatment and between the two groups after treatment in Pain, range of motion and functional disability .**Conclusion:** declophenac phonophoresis was proved to be more beneficial in reducing knee pain, improving range of motion and reducing of functional disability in patients with knee osteoarthritis.

Key words: osteoarthritis, declophenac phonophoresis, laser, electrogoniometer


Dedication
Sincere thanks to my family
that greatly supported me

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Alaa Abo-Srie

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List of Abbreviations

Abbreviation	***Name***
ACL:	Anterior cruciate ligament
ADL:	Activities of daily living
CO:	Control
EMS:	Earl morning stiffness
EMS:	Electromagnetic spectrum
ESR:	Erythrocyte sedimentation rate
Ga Al As:	Gallium aluminum arsenide
Ga As:	Gallium arsenide
He Ne:	Helium neon
JRF:	Joint reaction force
Laser:	light amplification by stimulated emission of radiation
LCL:	Lateral collateral ligament
LLL:	Low level laser
LILT:	Low intensity laser therapy
LLLT:	Low level laser therapy
LM:	Lateral meniscus
Min :	Minutes
MM:	Medial meniscus
NS:	Non significant
NSAIDs:	Non steroidal anti-inflammatory drugs

OA:	Osteoarthritis
PCL:	Posterior cruciate ligament
PGL:	Prostaglandin
PH:	Phonophoresis
RA:	Rheumatoid arthritis
ROM:	Range of motion
Sig	Significant
TA:	Topical application
US:	Ultrasound
VAS:	Visual analogue scale

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Chapter I

INTRODUCTION

Osteoarthritis (OA) is a wide spread slowly developing disease of the synovial joints. it is considered to be a chronic , degenerative and progressive condition affecting synovial joints . It is a common age related locomotor disease of the developing countries which mainly causes degeneration of hyaline cartilage and its symptoms occur most often in the weight bearing joints of the lower extremities . The most common large joints involved in this disease are the knee joints**,(Osiri 2002).**

In the Egyptian society , OA remains a major concern in term of cost, work loss and compensation as the percentage of osteoarthritic patients increased from one fourth to one half of the total treated patients in the physical therapy clinics . So in Egypt , OA is one of public health challenges that puts a large social and economic burden on society as well as affected individuals.**(Egyptian society for rehabilitation conference,2002)**.

Osteoarthritis is characterized by joint pain ,limitation of range of movement, loss of functional activities and joint deformity in the progressive stage with a restricted walking distance which is the common complaint for patients with knee OA**.** Many theories regarding types and aetiology of OA including primary OA which essentially still a condition of unknown aetiology and secondary osteoarthritis that may result from bone mal position, inflammatory joint disease as rheumatoid arthritis and metabolic conditions secondary to endocrine dysfunction such as Pajet's disease or Haemophiliac joint degeneration **(David et al., 1999).**