Pattern Of Symptomatic Primary Osteoarthritis In Elderly: A Hospital Based Study.

Thesis
Submitted in partial fulfillment of
M. D. degree in Geriatrics

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2008

دراسة أنماط خشونة المفاصل الأولية التى تسبب أعراض بين المرضى المسنيين: دراسة من داخل المستشفى

رسـالـة
توطئه للحصول على درجه الدكتوراه
فى طب و صحه المسنين

مقدمه من
الطبيبه/ نرمين نعيم عدلى ميخائيل
بكالوريوس الطب و الجراحه

تحت إشراف
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Acknowledgement

I wish to express my deepest gratitude to **Prof. Dr. Mohamed Hassan El-Banouby Professor of Neuropsychiatry and Geriatrics, Ain Shams University** for his guidance, scientific supervision, stimulating suggestions and great support. He generously devoted much of his time and effort in helping me through out the whole work.

I wish to express my deep thanks to **Prof. Dr. Mohamed Gamal Zaki Professor Of Physical Medicine, Rheumatology, And Rehabilitation, Ain Shams University**

for his scientific supervision, stimulating suggestions, continuous encouragement and great support through out this thesis.

I would like also to express my deep thanks to **Dr. Sarah Ahmed Hamza Lecturer of Geriatrics, Ain Shams University** for her guidance, scientific supervision and continuous great support through out this work.

I would like also to express my thanks to my senior stuff and my colleagues at Geriatric department for their help and support.

Nermien Naim Adly

Contents

List of Abbreviations

ACR	:	American College of Rheumatology
AAOS	:	American Academy of orthopedic Surgeons
ADL	:	Activities of Daily Living
AG	:	articular gelling
ATP	:	Adenosine-5'-triphosphate
BMD	:	bone mineral density
BMI	:	body mass index
CGRP	:	calcitonin gene-releated peptide
CM	:	clinical manifestations
CMC	:	carpometacarpal
COMP	:	Cartilage oligomeric protein
COX	:	Coxibs
CPPD	:	calcium pyrophosphate dihydrate
CRP	:	C-reactive protein
CT	:	computed axial tomography
CX	:	cervical
DIP	:	distal interphalangeal
DMOADs	:	Disease-Modifying Osteoarthritic Drugs
DSM-IV-TR	:	Diagnostics and Statistical Manual of Mental Disorders, fourth edition, " text revision"
Du	:	duration
ECM	:	extracelluar matrix
EOA	:	Erosive osteoarthritis
ESR	:	erythrocyte sedimentation rate
FAQ	:	functional assessment questionnaire
FJ	:	facet joints
G	:	grades of muscle power
GAD	:	Generalized Anxiety Disorder
GDS	:	Geriatric depression scale
HA	:	hyaluronic acid
IGF-1	:	insulin like growth factor -1
IL	:	interleukin

JSN	:	Joint space narrowing
KL	:	Kellgren and Lawrence
LSOA	:	Lumbosacral osteoarthritis
MCP	:	metacarpophalangeal
MMPs	:	matrix metalloproteinases
MMSE	:	Minimental status examination
MMT	:	manual muscle testing
MRI	:	magnetic resonance imaging
MTP	:	metatarso-phalangeal
NADH	:	Nicotinamide adenine dinucleotide
NSAIDs	:	nonsteroidal antiinflammatory drugs
OA	:	Osteoarthritis
PIP	:	proximal interphalangeal
PPT	:	Physical performance test
QWB	:	quality of wellbeing
RF	:	Rheumatoid factor
ROM	:	range of motion
SF OA	:	synovial fluid signs of OA
SHAQ-DI	:	Stanford Health Assessment Questionnaire-Disability index
SPECT	:	single photon emission scanning
SvPa	:	Pain severity and frequency
TENS	:	Transcutaneous electrical nerve stimulation
TGF- β□	:	transforming growth factor- β□
Th	:	thumb
TIMP	:	tissue inhibitors MMPs
TN	:	talonavicular
TNF-α	:	tumor necrosis factor-α
TP	:	timing of pain
TS		Trapezio-scaphoid
VASGHS	:	Visual analogue scale for global health status
VASP	:	Visual analogue scale for pain

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Introduction

Osteoarthritis (OA)is the most common form of arthritis(Carmona et al., 2001)(Watson, 1997),and the World Health organization estimates that globally 25% of adults aged over 65 years suffer from pain and disability associated with this disease (WHO, 2003). Almost every age group is affected by OA,but prevalence increases dramatically after age 50 years in men and 40 years in women (Meulenbelt et al., 1997). Estimations suggest that 40 million Americans of all ages are affected by osteoarthritis and that 70 to 90 percent of Americans older than 75 years are affected by osteoarthritis(Hinton et al.,2002). O.A. is a debilitating condition characterized by pain ,joint inflammation and joint stiffness, and results in a substantial degree of physical disability(Guccione et al., 1994). Osteoarthritis was ranked equally with heart disease ,congestive heart failure and chronic obstructive pulmonary disease as a cause of physical disability (Guccione et al., 1994).

It is widely known that many people in the general population have radiological evidence of osteoarthritis , but remain asymptomatic (Lawrence et al., 1966), and the inclusion of asymptomatic radiographic as clinical disease entity is controversial (Hart et al., 1991).

On the other hand , Bierman-Zeinstra et al., recommended that future follow up studies should investigate to what extent the presence of one or more of the specific symptoms / signs in combination with the absence of radiological osteoarthritis predict future radiological osteoarthritis(Bierman-Zeinstra et al.,2002).

Previous epidemiological studies have largely targeted radiographic OA, and most of them have concentrated on knee and hip joints (Felson,1988)(Yazici et al., 1975) (Gunther et al. 1998). While symptomatic OA should be a focus of studies because it causes disability and has formidable societal and public health impact, few studies have been conducted to study symptomatic OA, especially hand OA, among the elderly(Niu et al., 2003).

Hand osteoarthritis is important both as a cause of pain and minor disability and because it often indicates a systemic tendency to osteoarthritis which may involve the weight bearing joints , notably the hip and knee (Hochberg ,1991).

Hip osteoarthritis, along with osteoarthritis of the knee, affects the ability to walk and climb stairs more than any other disease(American Academy of Orthopaedic Surgeons,2004).

There is traditional methods for assessment of osteoarthritis that have been used for many year as: Articular index of Doyle et al. for osteoarthritis (Doyle et al.,1981),American college of Rheumatology criteria for classification and diagnosis of knee, hip and hand idiopathic osteoarthritis(Altman et al., 1986) (Altman et al., 1991) (Altman et al., 1990), traditional Kellgren & Lawrence grading (Kellgren & Lawrence, 1957) and Stanford Health Assessment Questionnaire (Fries et al.,1980).

The traditional methods are evaluated in several researches and there are several proposed methods were suggested to be

performed in addition to the traditional methods for evaluation of osteoarthritis.