بسم الله الرحمن الرحيم

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تم رفع هذه الرسالة بواسطة / هناء محمد علي

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى مسئولية عن محتوى هذه الرسالة.

ملاحظات: ....

Unicompartmental Knee Arthroplasty versus Total Knee Arthroplasty in Treatment of Unicompartmental Knee Osteoarthritis: A Systematic Review and Meta Analysis

Submitted in Partial Fulfillment for the Master Degree in Orthopedic Surgery

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Mohamed Ahmed Yusuf

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List of Abbreviations

Abb.	Full term
AAOS	American Academy of Orthopedic Surgeons
ACL	Anterior cruciate ligament
ACR	American College of Rheumatology
AKS	American Function Knee Score
AP	Anteroposterior
APM	Anterior Peripheral Medial
CI	Confidence interval
CT	Computed tomography
DVT	Deep venous thrombosis
FB	Fixed-bearing
HSS	Hospital for special surgery
HTO	High tibial osteotomy
K/L	Kellgren/Lawrence
KSS	Knee society score
LB	Lower bond
MB	Mobile-bearing
MCL	Medial collateral ligament
MRI	Magnetic resonance imaging
NCBI	National Center for Biotechnology Information
NLM	National Library of Medicine
OA	Osteoarthritis
OARSI	Osteoarthritis Research Society International
OKS	Oxford knee scoring
OR	Odds ratio
PA	Posteroanterior
PE	Polyethylene
PFJ	Patellofemoral Joint
RCT	Randomized controlled trial
REM	Random-effects method

List of Abbreviations cont...

Abb.	Full term
RML	Restricted maximum-likelihood
ROM	Range of motion
SD	Standard deviation
TKA	Total knee arthroplasty
UB	Upper bond
UKA	Unicompartmental knee arthroplasty
VAS	Visual analogue score
WOMAC	Western Ontario and McMaster Universities Osteoarthritis Index

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INTRODUCTION

Degenerative changes of the knee more frequently involve all the joint, including medial, lateral and patellofemoral compartments. [1] However, up to 30% of patients can develop OA in only one compartment of the joint, especially the medial one.[2]

The initial treatment of OA is non-operative and consists of patient education, weight reduction, physical therapy and pain relieving medication[3]. Other non-surgical interventions for unicompartimental OA are knee braces which may alter the alignment of the lower extremity[3, 4]. If conservative treatment fails, surgical treatment maybe indicated.

Several surgical approaches have been proposed to address it, such as high tibial osteotomy, unicompartmental knee arthroplasty (UKA) and total knee arthroplasty (TKA) according to the age and the level of activity of the patient, and the clinical features of the knee.[5] However, the best management of these patients is still controversial.[6]

UKA was first introduced in the 1970s as an alternative to TKA or HTO for single compartment OA. UKA is a joint resurfacing procedure in which the affected degenerative compartment is treated with implant prosthesis, while the non-affected compartment is preserved. UKA allows knee bone stock preservation and offers patients a less invasive procedure with a faster recovery time. [7, 8]

AIM OF THE WORK

The aim of the study is a systematic review conducted to compare the outcomes between UKA & TKA in patients with medial knee osteoarthritis as regard pain, range of motion, functional outcomes, patient satisfaction & incidence of complications and revision.

REVIEW OF LITERATURE

Medial Knee Osteoarthritis

Isolated advanced degenerative arthritis of the medial compartment of the knee is the most common indication for UKA.[9, 10]

The pathogenesis of isolated medial compartment Disease is well recognized. Progressive loss of articular cartilage leads to varus malalignment of the limb that then further overloads the articular cartilage and causes additional loss of articular cartilage over time.[11, 12]

Fig. 1: The typical disease pattern of anteromedial osteoarthritis on x-ray radiograph