



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

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**MR ARTHROGRAPHY (DIRECT AND INDIRECT)
VERSUS CONVENTIONAL MRI EXAMINATION
IN DIFFERENT KNEE JOINT LESIONS**

Thesis

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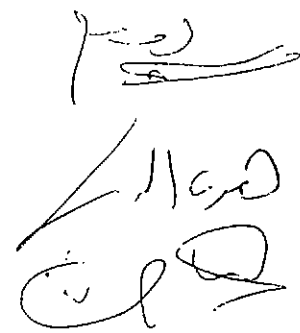
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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ABSTRACT

The musculoskeletal system is becoming an area for which magnetic resonance (MR) imaging has major applications, the multiplanar imaging capabilities, absence of bone artifact, and improved soft tissue contrast resolution of MR imaging are major advantages in studies of the musculoskeletal system compared with computed tomography (CT).

Conventional MR imaging has become established as the most effective radiological tool in the assessment of joint disorders and in conjunction with arthroscopic advances has led to a greater understanding of joint anatomy and internal derangement. It is frequently considered the best method of diagnosis in musculoskeletal disorders.

More recently, the usefulness of MR arthrography has gained increased acceptance, this is particularly interesting, given that conventional MRI initially replaced arthrography for many applications, while MR arthrography is invasive, it can provide additional information about the integrity of joint structures, and has proven to be advantageous in evaluating intra-articular anatomy and detecting disorders especially cartilagenous and ligamentous abnormalities. It is a technique which is becoming increasingly widespread in its use, it provides delineation of structures and defects that might otherwise remain occult on conventional MR images.

It combines the advantages of arthrographic joint distension and delineation of intra-articular structures with the superior spatial resolution of MRI, in general this technique improves the diagnostic confidence, particularly in the assessment of subtle lesions and of complex anatomical structures.

Key words: Arthrography - Knee joint - Articular cartilage
Magnetic Resonance imaging

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LIST OF ABBREVIATIONS

ACL	: Anterior cruciate ligament.
BPTB	: Bone patellar tendon bone.
CT	: Computed Tomography.
C/N	: Contrast to noise ratio.
ESR	: Erythrocytic sedimentation rate.
GD-DTPA	: Gadolinium diethylenetriamine pentaacetic acid.
I.V	: Intravenous.
JRA	: Juvenile Rheumatoid arthritis.
LCL	: Lateral collateral ligament.
MCL	: Medial collateral ligament.
MRI	: Magnetic resonance imaging.
OCD	: Osteochondritis dissecans.
PCL	: Posterior cruciate ligament.
POL	: Posterior oblique ligament.
PVNS	: Pigmented villonodular synovitis.
SE	: Spin Echo.
SNR	: Signal to noise ratio.
SPGR	: Spoiled gradient recalled echo.
SOC	: Synovial Osteochondromatosis.
STIR	: Short time inversion recovery.
T.B	: Tuberculosis.
T.E	: Echo Time.
TR	: Repetition Time.