

# الآية

قال الله تعالى:

قُلْ إِنِّي صَلَاتِي وَنُسُكِي وَمَحْيَايَ وَمَمَاتِي لِلَّهِ رَبِّ  
الْعَالَمِينَ لَا شَرِيكَ لَهُ وَبِذَلِكَ أُمِرْتُ وَأَنَا أَوَّلُ  
الْمُسْلِمِينَ

صدق الله العظيم

الأنعام 162- 163

# Dedicatio n

*.....To my parents*

*..... To soul of my sister laiyla*

*..... To my sisters and brothers*

*To my brother El tom and his wife*

*.....To my lovely friends*

*.....To my colleagues*

*To everyone taught me new  
.....concept*

**Esmat k.S**

# Acknowledgment

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Thank you without you all this would never have been possible

.Many thanks and love for all

## **Esmat K.S**

### **Abstract**

The objectives of this study were to find out the knee joint diseases using high resolution ultrasound in patients who complaining of knee joint pain and swelling. And characterizing the sonographic feature of each cause, as well as to detect the most common knee joint diseases that affect the Sudanese populations and how it does relates to the age, sex. And To correlate between different knee joint diseases and side of pain, site of pain , nature of pain , .duration of pain, joint movement, and presence of swelling

This study was conducted in Elshafa Medical Complex and Omdurman .Military Hospital from November 2011 to March 2012

Fifty patients were investigated (23 male, 27 female) aged between 20 -70 years, all of them had a knee joint pain, and all patients who were aged below .20 years were excluded

The researcher found that in 34 patients (68%) there were detectable sonographic abnormalities, and in 16 patients (32%) the scanning result was .normal

The result showed that: the anterior knee compartment is the most compartment affected with pain, and the causes of the pain are suprapatellar joint effusion and bursitis (28%) of the total patients. cartilaginous edema of .(the patella-femoral articulation (6%). and patellar tendonitis (4%

The posterior knee compartment is second compartment affected with pain and the causes are baker's cyst (14%), ruptured baker's cyst (8%), deep vein .(thrombosis of the popliteal vein (2%), and Periosteal desmoids tumor (2%

The medial knee compartment is a third compartment affected with knee pain, .(and the detected cause is Lipoma only (4%

The lateral knee compartment is a least compartment affected with pain, and .the researcher doesn't detect any cause sonographically

In view of this result the researcher found that the ultrasound has a great value .in evaluation of the knee joint pain and swelling

### ملخص الدراسة

الهدف من هذه الدراسة هو تحديد اسباب ألم مفصل الركبة باستخدام الموجات فوق الصوتية ذات درجة الوضوح العالية. وتمييز كل سبب بواسطة الموجات فوق الصوتية، بالإضافة لإكتشاف أمراض مفصل الركبة الأكثر شيوعاً بين السودانيين وعلاقتها بالنوع والسن وكذلك الربط بين أمراض مفصل الركبة المختلفة وجانب الألم و موقع الألم، وطبيعة الألم، ومدّة الألم، وحركة المفصل، ووجود الورم .

هذه الدراسة أجريت في مجمع الصحافة الطبي ومستشفى أم درمان العسكري من نوفمبر 2011 إلى مارس 2012.

خمسون مريضاً تم مسحهم (23 ذكر، 27 أنثى) تتراوح اعمارهم بين 20-70 جميعهم يعانون من ألم وورم مفصل الركبه، وتم اسبعاد المرضي دون ال 20 عام.

وجد الباحث ان 34 مريضاً (68 %) كانت لهم اسباب لالم مفصل الركبه واضحة بمسح الموجات فوق الصوتية، وفي 16 مريض (32 %) كانت نتيجة المسح طبيعية.

اوضحت نتائج البحث : إنّ مكون الركبة الامامي أكثر المكونات تائرا بالألم، وأسباب الألم هي إراقة مفصل الركبه والتهاب الكوة الرضفي (28%) من المرضى الكليين. الونمة الغضروفية لمفصل العظمة الفخذية الرضفية (6%). وإلتهاب ألاتار الرضفي (4%).

إنّ مكون الركبة الخلفي هو ثاني المكونات تائراً بالألم وكانت الأسباب هي كيس بيكر (14%)، تفجّر كيس بيكر (8%)، تخثر أاوردة العميقة لوريد البوبليتيل (2%) ، والورم الدسمويدي لعظمة الفخذ (2%).

إنّ مكون الركبة الأثني هو ثالث المكونات تائرا بألم الركبة، والسبب الوحيد المكتشف هو الورم الشحمي الحميد (4%).

إنّ مكون الركبة الوحشي هو أقلّ المكونات تائراً بالألم، والباحث لم يكتشف أيّ سبب بمسح الموجات فوق الصوتيه.

نظراً لهذه النتيجة، وجد الباحث ان الموجات فوق الصوتية لها قيمة عظيمة في تقييم ألم وورم مفصل الركبة .

### List of abbreviations

OA	Osteoarthritis
MRI	Magnetic Resonance Imaging
CT	Computed Tomography
U/S	Ultrasound

HRUS	High Resolution Ultrasound
LCL	Lateral Collateral Ligament
MCL	Medial Collateral Ligament
ACL	Anterior Cruciate Ligament
PCL	Posterior Cruciate Ligament
MM	Medial Meniscus
LM	Lateral Meniscus
TB	Tuberculosis
DVT	Deep Vein Thrombosis
TSE	Turbo spin echo sequence
T2	T2 weighted image
EFV	Extended field of view

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