

بسم الله الرحمن الرحيم

قال تعالى :

{ لَا يُكَلِّفُ اللَّهُ نَفْسًا إِلَّا وُسْعَهَا لَهَا مَا كَسَبَتْ وَعَلَيْهَا مَا
اَكْتَسَبَتْ رَبَّنَا لَا تُؤَاخِذْنَا إِنْ نَسِينَا أَوْ أَخْطَأْنَا رَبَّنَا وَلَا
تَحْمِلْ عَلَيْنَا إِصْرًا كَمَا حَمَلْتَهُ عَلَى الَّذِينَ مِنْ قَبْلِنَا رَبَّنَا
وَلَا تُحَمِّلْنَا مَا لَا طَاقَةَ لَنَا بِهِ وَاعْفُ عَنَّا وَاعْفِرْ لَنَا
وَارْحَمْنَا أَنْتَ مَوْلَانَا فَانصُرْنَا عَلَى الْقَوْمِ الْكَافِرِينَ }

سورة البقرة الآية {286}

Dedication

.....To

My family

My Teachers

My Friends

My Colleagues

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Abstract

MRI scan play important role in diagnostic radiology, make possible study of sectional anatomy, evaluate the texture of soft lesion, three dimension imaging .and fast sequence examination

The aim of this study to compare between two MR machine with different magnetic power the first 1.5 tesl an the second 0.3 tesla to determine the best in .quality between them

Random sample consist of 20 patient divided 50:50 between the two MR machine. The patient data registered (age and gender). Their age ranged from 20 to 80 years old. The study was done in (ALmarkz ALtiby ALhdeeth) and ((ALNileen Medical Center

The Chi square test was applied to collected data and the output values showed clearly the MR machine 1.5T was better than MR machine 0.3T in lumbar spine .image quality

المستخلص

يمثل الرنين المغنطيسي دوراً هاماً في مجال الاشعه التشخيصيه وله عدة مميزات مثل دراسه التشريح المقطعى تقيم قوام الانسجه التصوير ثلاثى الابعاد والفحص التسلسلى السريع.

الهدف من هذه الدراسه المقارنه بين جهازين للرنين المكنطيسي الاول قوته 1.5 تسلا والثانى 0.3 تسلا لمعرفة ايهما افضل فى جودة الصور للفقرات القطنيه.

تم اخذ 20 عينه عشوائيه قسمت بالتساوى على الجهازين وكانت البيانات المأخوذه منه هى (العمر-النوع) وكان توزيع اعمارهم بين 20 الى 80 عام.

تم اجراء الدراسه فى (المركز الطبي الحديث) و (مركز النيلين الطبي).
تم تحليل البيانات المأخوذه بواسطه (Chi-Square test) واطهرت القيم المخرجه بواسطه
التحليل افضليت جهاز الرنين المغنطيسي بقوة 1.5 تسلا على نظيره فى جوده الصور الفقرات
القطنيه.

:ABBREVIATIONS

.A summary of common abbreviations in M.R.I and throughout the research

A.....	Anterior
ASIS.....	Anterior superior iliac spine
AVM.....	Arterio venos malformation
CNR.....	Contrast to noise ratio

CNS.....	Central nervous system
EPI.....	Echo planar imaging
FAST.....	Fourier acquired steady state
FID.....	Free induction decay signal
FLAIR.....	Fluid attenuated inversion recovery
F.MRI.....	Functional MRI
FSE.....	Fast spin echo
GFE.....	Gradient field echo
GR.....	Gradient rephrasing
I.....	Inferior
IR.....	Inversion recovery
MAST.....	Motion artifact suppression
MR.....	Magnetic resonance
MRA.....	Magnetic resonance angiography
MRI.....	Magnetic resonance imaging
PC.....	Phase contrast
PD.....	Proton density
ROI.....	Region of interest
SE.....	Spin echo
SNR.....	Signal to noise ratio
SS.....	Single shot
STIR.....	Short time inversion recovery
TE.....	Echo time

TOF.....Time of flight
TR.....Repetition time
TSE.....Turbo spin echo