Diffusion MRI as an alternative for dynamic contrast MRI in evaluation of hepatocellular carcinoma

A THESIS

Submitted to the Faculty of Medicine, Ain Shams University
in Partial Fulfillment of the Requirements of the M.D Degree in
Radiodiagnosis

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2017

دور الرنين المغناطيسى بإستخدام خاصية الإنتشار كبديل لفحص الرنين المغناطيسى بإستخدام الصبغة فى تقييم البؤر الكبدية السرطانية

رسالة
مقدمة إلى كلية الطب – جامعة عين شمس
كجزء من متطلبات الحصول على درجة الدكتوراه
فى " الأشعة التشخيصية "

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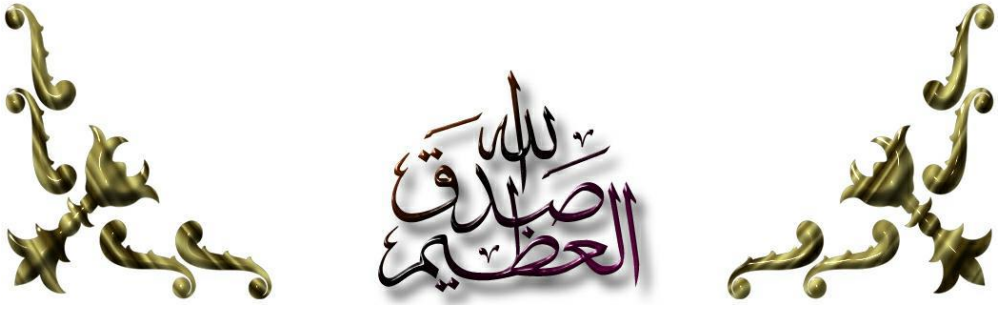
2017

وَقُلِ اعْمَلُوا فَسَيَرَى اللَّهُ
عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ



*All thanks to **Allah**, the most beneficent and merciful.*

I am so grateful and most appreciative to the efforts of Prof. Dr. Ahmed Mohamed Monib, Professor of Radio-diagnosis, Faculty of Medicine, Ain shams University. No words can express what I owe him for his endless patience, expert guidance and continuous support throughout this work.

I am so grateful to the efforts of Prof. Dr. Omnia Ahmed Kamal, Professor of Radio-diagnosis, Faculty of Medicine, Ain shams University. For her kind supervision, encouragement and valuable advice.

I wish to express my thanks to DR. Amal Ibrahim, Lecturer of Radio-diagnosis, Faculty of Medicine, Ain shams University for her help and assistance.

Iam indebted to my family for their unconditioned love, and to my friends and my colleagues for their endless support and care.

Shrouk Mohamed

Abstract

Background: Hepatocellular carcinoma (HCC) is a major worldwide health concern**.** Magnetic resonance imaging (MRI) is now preferred when further characterization of hepatic masses is needed , Dynamic contrast enhanced MRI examination has become a routine component of abdominal imaging, yet the high cost/benefit ratio and risk of contrast media side effects remain an issue. DWI (diffusion-weighted imaging) is a simple and sensitive method that enables qualitative and quantitative assessment without the use of gadolinium chelates, which makes it a highly attractive technique, particularly in patients with renal dysfunction.

Key words: hepatocellular carcinoma (HCC), diffusion weighted images (DWIs), apparent diffusion coefficient (ADC).

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Abbreviations

AASLD	American Association For The Study Of Liver Diseases
ACR	American college of radiology
ADC	Apparent Diffusion Coefficient
AFP	alpha fetoprotein
AP	Arterio-portal
BH	Breath hold
CE	Contrast Enhanced
CLEAR	Constant LEvel AppeaRance
CKD	chronic kidney disease
CNR	contrast to noise ratio
CT	Computed Tomography
DCE-MRI	Dynamic contrast enhanced Magnetic Resonance Imaging
DN	dysplastic nodule