

# Dedication

This Research is dedicated

To my Parents

Who taught me how to make my future

They have given me the drive and discipline to tackle and task with enthusiasm and determination without their love this project would not have been possible

To

My sister and brother for their valuable supports

And my teachers

I dedicate this work

# *Acknowledgement*

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## Abbreviations:

ACR	American College of Radiology
ABPJ	Anamolousbiliopancreatic junction
CCK	Cholecystokinin
CBD	Common bile duct
CT	Computed tomography
ECG	Electrocardiography
ERCP	Endoscopic Retrograde Cholangiopancreatography
FSE	Fast spin echo
FOV	Field of view
IOC	Intraoperative cholangiography
IV	Intravenous
LC	Laparoscopic cholecystectomy
MRCP	Magnetic Resonance Cholangiopancreatography
MRC	Magnetic Resonance Choleangiography
MRI	Magnetic Resonance Imaging
MIP	Maximum Intensity Projection
PTC	Percutaneous Transhepatic Choleangiography
PSC	Primary Sclerosing Cholangitis
3 D	Three dimensional
TSE	Turbo spin echo
U/S	Ultrasound Sound
VZV	Vermicelli zoster virus
T2	Weighted image that demonstrates the differences in the T2 times of the tissues



## **Abstract**

Magnetic resonance Cholangiopancreatography (MRCP) is a technique that has evolved over the past two decades, and consider as a noninvasive diagnostic modality capable to produce high-quality images of the Biliary and pancreatic disorders.

This study was across sectional descriptive study aimed to Study of Biliary system diseases using magnetic resonance imaging carried out at king Khalid hospital- KSA from February 2017 to December 2018.

There were 92 patients scanned using two magnetic resonance machines of energy 1.5 tesla and 3 tesla, all those patients had age between 18 to 88 years and had Biliary disease, any patient with age out of this group or had normal Biliary system was excluded from this study.

Study showed that there was 61.3% of cases were female and 38.7 % were male, also study showed that the most affected age group was 31-45 years.

Study resulted magednetic Resonance Imaging was very accurate in diagnosis and differentiated between Biliary system diseases and female was more affected than male Biliary system diseases. Also study revealed that the most diseases affected the Biliary system were stone and cyst respectively.

Study recommended that further studies should be done in this field with increasing number of sample, age groups and comparing with other motilities.

## ملخص الدراسة :

يعتبر جهاز الرنين المغنطيسي وسيلة تشخيصية قادرة على إنتاج صور عالية الجودة للاضطرابات الصفراوية والبنكرياسية .

أجريت هذه الدراسة عبر دراسة وصفية مقطعية تهدف إلى دراسة أمراض نظام القنوات الصفراوية باستخدام التصوير بالرنين المغناطيسي في مستشفى الملك خالد بالمملكة العربية السعودية في الفترة من فبراير 2017 إلى ديسمبر 2018. تم دراسة 92 مريضاً باستخدام جهازين للرنين المغنطيسي ذو شدة مغنطيسية 1.5 و 3 تسلا. والتي تتراوح أعمارهم بين 18 إلى 88 سنة وكان لديهم مرض الصفراوي ، وتم استثناء أي مريض خارج هذه المجموعة. أظهرت الدراسة أن هناك 61.3 % من الحالات كانت من الإناث و 38.7 % من الذكور ، كما أظهرت الدراسة أن الفئة العمرية الأكثر تضرراً كانت بين 31-45 سنة.

وأظهرت الدراسة أن التصوير بالرنين المغناطيسي كان دقيقاً جداً في تشخيص مختلف أمراض الجهاز الصفراوي وكانت الأنثى أكثر تأثراً من أمراض الجهاز الصفراوي من الذكور ، كما كشفت الدراسة أن معظم الأمراض التي تصيب النظام الصفراوي كانت الحصاوي والتكيس على التوالي.

وأوصت الدراسة بإجراء المزيد من الدراسات في هذا المجال مع زيادة عدد العينات والفئات العمرية ومقارنتها بالوسائل الأخرى.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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College of Graduate Studies

**Study of Biliary System Diseases using Magnetic  
Resonance Imaging**

دراسة أمراض الجهاز الصفراوي باستخدام التصوير بالرنين  
المغناطيسي

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