

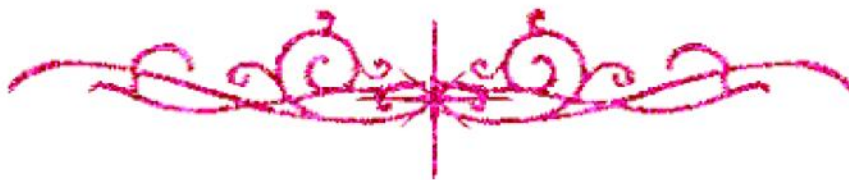
بسم الله الرحمن الرحيم



HOSSAM MAGHRABY



شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
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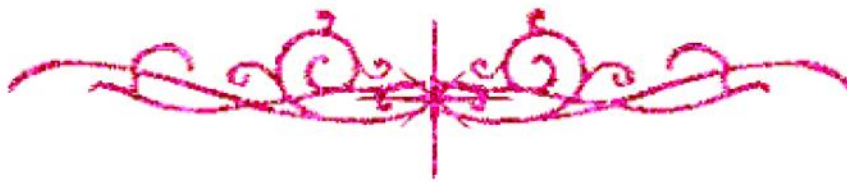
تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



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بعض الوثائق الأصلية تالفة



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بالرسالة صفحات

لم ترد بالأصل



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ROLE OF SPIRAL CT IN ASSESSMENT OF FOCAL HEPATIC LESIONS

Thesis

Submitted for Partial Fulfillment of Master Degree

In

" Diagnostic Radiology "

By

Usama El-Saied Ghieda

M.B; B.Ch.

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2000

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2000

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

إِنَّا فَتَحْنَا لَكَ فَتْحًا مُبِينًا ^(١) لِيُغْفِرَ لَكَ
اللَّهُ مَا تَقَدَّمَ مِنْ ذَنْبِكَ وَمَا تَأَخَّرَ وَيُتِمَّ
نِعْمَتَهُ عَلَيْكَ وَيَهْدِيكَ صِرَاطًا مُسْتَقِيمًا ^(٢)

صَلَّى اللَّهُ الْعَظِيمِ

سُورَةُ الْفَتْحِ ^(٣.١)

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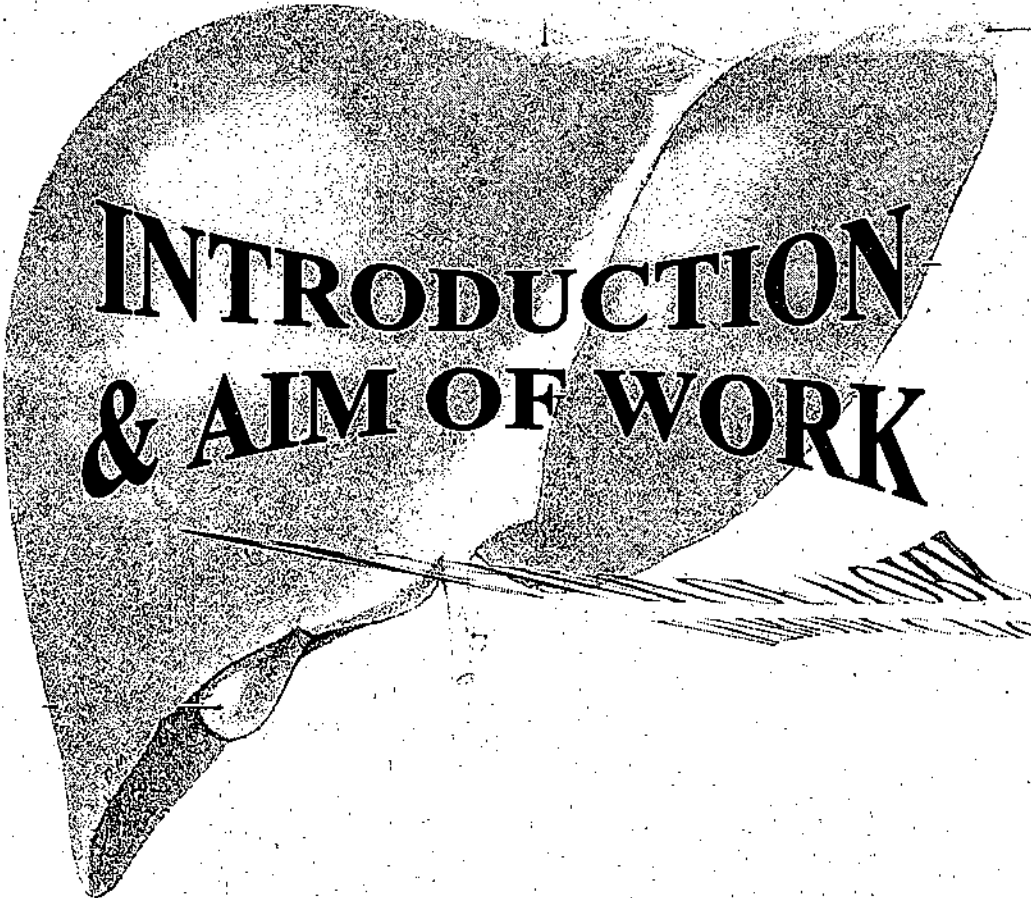
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ABBREVIATIONS

AHN	:	Adenomatous hyperplastic nodule
AIDS	:	Acquired immuno-deficiency syndrome
CECT	:	Contrast enhanced CT
CT	:	Computed tomography
CTAP	:	CT arterial portography
CTHA	:	CT hepatic arteriography
EHE	:	Epithelioid Haemangioendothelioma
FLC	:	Fibrolamellar carcinoma
FNH	:	Focal nodular hyperplasia
HAP	:	Hepatic arterial phase
HCA	:	Hepatocellular adenoma
HCC	:	Hepatocellular carcinoma
H-CT	:	Helical CT
HU	:	Hounsfield unit
I.V.	:	Intravenous contrast.
I-CAC	:	Intrahepatic cholangiocarcinoma.
IHE	:	Infantile haemangioendothelioma
IVC	:	Inferior vena cava
MR	:	Magnetic resonance
NCECT	:	Non-contrast enhanced CT
NRH	:	Nodular regenerative hyperplasia
PVP	:	Portal venous phase
ROI	:	Region of interest
UES	:	Undifferentiated embryonal sarcoma
3D	:	Three-dimensional



INTRODUCTION & AIM OF WORK

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The liver is a functionally complex organ involved in the manufacture of proteins, metabolism of carbohydrates and excretion and detoxification of metabolites. It is also, one of the most frequently injured organs in the body and a target of wide range of inflammatory, neoplastic and circulatory disturbances (*Bluemke, et al., 1995*)⁽¹⁾.

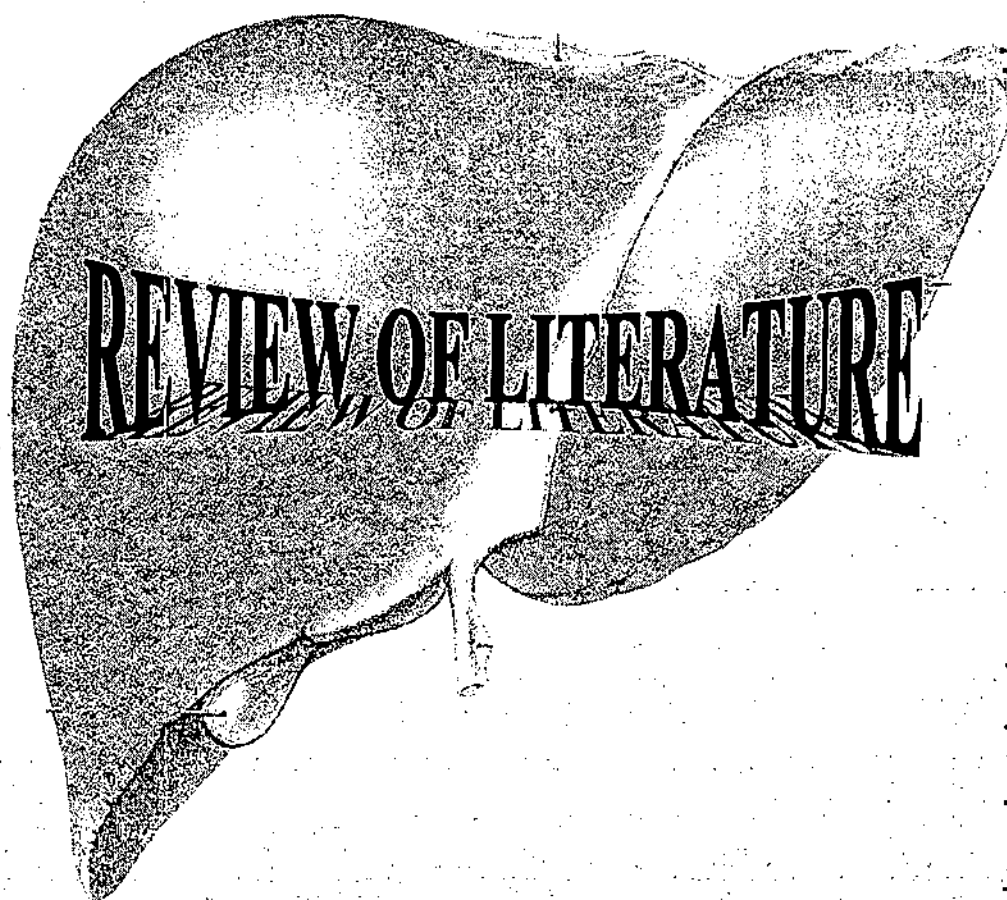
Hepatic focal lesions are either inflammatory or neoplastic. Inflammatory hepatic lesions may be due to bacterial, fungal, or granulomatous infections (*Donnelly, 1996*)⁽²⁾. Neoplastic hepatic lesions are either benign or malignant. Benign liver lesions are classified into those of hepatocellular origin, cholangiocellular origin, mesenchymal origin and heterotopic tissue (*Craig, et al., 1989*)⁽³⁾. Malignant hepatic neoplasms are either primary or metastatic. Approximately, 93.1% of primary malignant hepatic neoplasms are epithelial in origin, with hepatocellular carcinoma (82.3%) and cholangiocarcinoma (9.7%) accounting for nearly all of these tumors (*Fernandez & Redvanly, 1998*)⁽⁴⁾. Regarding metastases, it is estimated that between 30% and 70% of patients who die of cancer have liver metastases (*Paley & Ros, 1998*)⁽⁵⁾.

Hepatic CT has undergone fast changes since the mid 1970s. Initially, the abdomen was scanned with about 2.5 minutes scanners. Thus, there was significant motion artifact and poor resolution. These scanners imaged the liver with thick slices (13mm). Now, most new CT equipment has scan times below 5 seconds and slice thickness can be varied from 1.5 to 10mm. So, both our techniques and our understanding of hepatic diseases have increased and changed with the advances in CT equipment (*Bernardino, 1986*)⁽⁶⁾.

Spiral (Helical) CT has been advocated as a major advancement in CT technology. Spiral CT scanning is rapid, the volume of intravenous contrast material can be potentially reduced and high quality coronal, sagittal, and three-dimensional reconstruction is possible (Zeman, et al., 1993)⁽⁷⁾. It has rapidly gained acceptance as the preferred CT technique for routine liver evaluation because it provides image acquisition at peak enhancement of the liver parenchyma during a single breath hold (Bluemke, et al., 1994)⁽⁸⁾.

AIM OF THE WORK

The aim of this study is to assess the role of spiral CT imaging in the diagnosis of focal hepatic lesions.



REVIEW
OF
LITERATURE