



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكرو فيلم

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون أية تغيرات



يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %



شبكة المعلومات الجامعية



بعض الوثائق الأصلية تالفة



شبكة المعلومات الجامعية



بالرسالة صفحات
لم ترد بالأصل

ROLE OF DIFFERENT IMAGING MODALITIES IN ASSESSMENT OF PATIENTS UNDERGOING HEPATIC TRANSPLANTATION

ESSAY

Submitted for partial fulfillment of
Master Degree in Radiodiagnosis

BY

Dalia Mohamed Reda El.Metwally

M.B.B.ch.

Ain Shams University

SUPERVISED BY

Assist. Prof. Dr. Ahmed Khodair Aly

Assist. Prof. of Radiodiagnosis
Faculty of Medicine - Ain Shams University

Dr. Sherif Hamed Abou Gamrah

Lecturer of Radiodiagnosis
Faculty of Medicine - Ain Shams University

**Department of Radiodiagnosis
Faculty of Medicine
Ain Shams University**

2002

B
9202

Acknowledgement

Thanks first and last to GOD as we owe him for his great care, support and guidance in every step in our life.

I would like to express my profound gratitude and cordial appreciation to Prof. Dr. Ahmed Khodair Aly, Assist. Prof. of Radiodiagnosis, Faculty of Medicine, Ain Shams University, for his moral support, valuable supervision and for enabling me to fulfill this work. He is not only my professor to whom I am very grateful, but is also a human to whom I wish always the best of everything.

I would also like to thank Dr. Sherif Hamed Abou Gamrah, Lecturer of Radiodiagnosis, Faculty of Medicine, Ain Shams University for his help and guidance and also all my professors in the Radiodiagnosis department, Ain Shams University, for making this department an excellent place for learning and practicing.

Contents

• List of figures.	1
• Introduction and aim of the work.	4
• Anatomy of the liver and biliary system.	5
• Indications & contraindications of liver transplantation with related pathology of some common diseases.	13
• Role of different imaging modalities in assessment of patient undergoing liver transplantation.	37
• Summary and conclusion.	90
• Abbreviations.	92
• References	94
• Arabic Summary.	105

Contents

1	Introduction	•
2	Objectives and aims of the work	•
3	Structure of the book and brief description of the contents	•
4	References to scientific literature	•
5	Abbreviations and symbols	•
6	Role of the author in the preparation of the manuscript	•
7	References to scientific literature	•
8	References to scientific literature	•
9	References to scientific literature	•
10	References to scientific literature	•
11	References to scientific literature	•
12	References to scientific literature	•
13	References to scientific literature	•
14	References to scientific literature	•
15	References to scientific literature	•

LIST OF FIGURES

List of Figures

- Fig (1) :** (a) anterior view ; (b) posterior view ; (c) visceral surface ; (d) structures seen through the liver.
- Fig (2) :** Segmental anatomy of the liver.
- Fig (3) :** Branches of the celiac artery.
- Fig (4) :** The biliary system and its relations.
- Fig (5) :** Demonstration of hepatoma with lipiodol and sequential CT scans.
- Fig (6) :** US imaging of Hepatoma.
- Fig (7) :** RAO coronal T₁ post-gadolinium image of hepatoma.
- Fig (8) :** Cholangiocarcinoma of the hilum.
- Fig (9) :** Klatskin tumor of the left hepatic duct.
- Fig (10) :** Cholangiocarcinoma – T₁ GRE post-gadolinium images.
- Fig (11) :** US of chronic active hepatitis.
- Fig (12) :** ^{99m}Tc – colloid scan. Diffuse hepatic failure with splenic enlargement.
- Fig (13) :** ^{99m}Tc – colloid scan in chronic cirrhosis.
- Fig (14) :** Severe chronic liver disease by US.
- Fig (15) :** Color Doppler of hepatic vein thrombosis.
- Fig (16) :** Reversed portal venous flow by color and duplex Doppler.
- Fig (17) :** CT non – enhanced liver scan in hemochromatosis.
- Fig (18) :** Sclerosing cholangitis.
- Fig (19) :** Biliary atresia.
- Fig (20) :** Normal appearances of liver & biliary system by US.
- Fig (21) :** Normal appearances of portal vein by color & duplex Doppler.
- Fig (22) :** Normal appearances of hepatic veins by color and duplex Doppler.
- Fig (23) :** Normal CT appearance of the liver.
- Fig (24) :** Normal MRI appearance of the liver.
- Fig (25) :** ^{99m}TC – colloid scan of normal liver.

List of Figures

- Fig (26) :** Hepatic artery stenosis demonstrated by US and arteriogram after LTx.
- Fig (27) :** Doppler appearance of hepatic artery stenosis after LTx.
- Fig (28) :** Doppler appearance of hepatic artery wave form immediately posttransplantation.
- Fig (29) :** Collateral channels in portal vein thrombosis in color and duplex Doppler after LTx.
- Fig (30) :** Color Doppler of portal vein stenosis with sample Doppler waveforms after LTx.
- Fig (31) :** Doppler examination in lower caval stenosis after LTx.
- Fig (32) :** Hepatic artery angioplasty for hepatic artery stenosis after LTx.
- Fig (33) :** Portal vein angioplasty for vein stenosis.
- Fig (34) :** CT of bile duct necrosis secondary to hepatic artery thrombosis after LTx.
- Fig (35) :** Percutaneous cholangiogram shows biliary obstruction by stones after LTx.
- Fig (36) :** percutaneous cholangiogram of leak at choledochojejunostomy anastomosis after LTx.
- Fig (37) :** Radionuclide imaging of biliary leak after LTx.
- Fig (38) :** (A) CT scan shows biliary leak after LTx.
(B) Hepatobiliary scintigraphy shows biliary leak after LTx.
- Fig (39) :** Hepatobiliary scintigraphy show bile duct obstruction after LTx.
- Fig (40) :** PTC shows leakage from the choledochojejunostomy anastomosis after LTx.
- Fig (41) :** (A) Serial images of hepatobiliary scintigraphy.
(B) Time – activity curve. Normal uptake and excretion of tracer by the transplanted live.
- Fig (42) :** (A) Serial images of hepatobiliary scintigraphy.