

## MAGNETIC RESONANCE IMAGING IN LIVER DISEASE; TECHNICAL APPROACH, DIAGNOSTIC IMAGING OF LIVER NEOPLASMS, FOCUS ON A NEW SUPERPARAMAGNETIC CONTRAST AGENT

**Thomas J. Vogl, Riccardo Lencioni, Renate M. Hammerstingl, Carlo Bartolozzi**

Published by Georg Thieme Verlag (2003)

ISBN: 3-13-133191-7 253 pages plus index

RRP: 99.00

*Magnetic Resonance Imaging and Liver Disease* has been written at a time when there have been some significant improvements in MRI scanning of the liver with the development of new imaging protocols and contrast agents, especially the new super paramagnetic contrast agents.

The book has a concise and organised approach to the most commonly encountered topics facing radiologists and physicians interpreting MRI scans of the liver.

The book is broken down into twelve chapters covering hepatic anatomy, diffuse, benign and malignant hepatic disease. The book is most useful to the MRI radiologist and technologist as it has an in-depth discussion about magnetic resonance protocols, comparing the outcome of the MRI imaging to that of ultrasound and helical CT scanning.

In Chapter 2 on liver anatomy, it may have been of value to expand the section on normal variants.

Chapters 8 and 9, dealing with pre-therapeutic diagnosis and treatment will be specifically useful to radiologists and

clinicians alike, as it deals with different imaging modalities and contrast agents as well as highlighting tumour response to percutaneous ethanol injections, trans-catheter arterial chemoembolisation and laser induced thermotherapy.

Classification of detected liver lesions may be difficult using biphasic helical scanning as well as unenhanced MRI in some cases. Previously computed tomography during arterial portography (CTAP) has become the established method of pre-operative diagnostic evaluation as it has a high sensitivity for detecting liver lesions. The disadvantage of this procedure is its invasiveness and a high rate of false positive results.

Improved differentiation of liver tumours is however possible using extracellular MRI contrast agents, namely superparamagnetic iron oxide particles which are absorbed by RES cells of the normal liver, and by tumour consisting of RES. Iron oxide enhanced MRI is thus becoming an acceptable non-invasive technique which will provide high pre-operative diagnostic efficiency and can replace CTAP in many cases.

In general, the spectrum of disease covered as well as the strategies given to evaluate the liver in this book is impressive. After reading this book, radiologists and physicians should feel comfortable understanding the imaging strategies applied to screening for hepatic disease and how this differs from the pre-operative diagnostic work-up, as well as evaluating the liver after different forms of treatment.

This text can certainly help confident image interpretation and management of liver disease and will provide useful information for educating referring physicians.

*Lourens Bester*

*Mayne Health Diagnostic Imaging*

*Westmead Private Hospital, NSW*

