

磁力共振掃描

簡介

磁力共振掃描是利用人造磁場，電磁波及電腦科技為人體造影。人體細胞主要的成分是水份，在強力的磁場和電磁波的相互作用下，水的氫原子發出訊號，經電腦處理後，精細的圖像便可顯示出來。磁力共振掃描是先進的影像技術，絕少引起不良反應。然而由於磁場的力量的確很大，以下類別的病人可能不宜採用磁力共振掃描檢查：

- ◆ 病人體內置有心臟起搏器或人工心瓣等；強力的磁場和電磁波可能會干擾醫療儀器
- ◆ 若病人的器官安裝任何金屬儀器，均有可能移位或鬆脫
- ◆ 懷孕首三個月應避免接受這項檢查

檢查前的準備

- ◆ 為確保有充足的時間準備，請準時到達，並預留四小時作檢查
- ◆ 需簽署同意書
- ◆ 病童需由家長或親人陪同

- ◆ 檢查前四小時不可飲食
- ◆ 請更換醫院提供的袍
- ◆ 假若是接受眼部及腦部檢查的病人，眼部不可有化妝，面部化妝亦應盡量減少
- ◆ 身上所有金屬物品必須除下
- ◆ 對磁場有反應的物件不要帶進檢查室，包括信用卡、提款卡、儲值車票等
- ◆ 請勿攜帶貴重或體積過大的物品

檢查過程

- ◆ 整個檢查過程由放射專科醫生監察進行
- ◆ 需時約一至二小時
- ◆ 檢查進行時，請保持安靜
- ◆ 或需要接受靜脈顯影劑注射
- ◆ 可能接駁脈搏感應器或心電圖機監察維生指數
- ◆ 在掃描室中，病人會躺在特備的床上，並有棉毯覆蓋身體保暖

- ◆ 由於掃描是間歇地進行，所以請盡量保持鬆弛和避免移動身體
- ◆ 掃描進行時，儀器會發出噪音，病人須戴上耳塞
- ◆ 病童則可能需要注射鎮靜劑
- ◆ 整個過程進行時，醫療人員會與病人保持緊密聯絡和對話

檢查完成後

掃描完畢後，病人可以如常進食。有關的檢查結果將會送交主診醫生。

併發症

- ◆ 檢查所用的造影劑甚為安全，約2%病人可能會有頭痛、嘔吐、噁心等反應
- ◆ 嚴重致命的機會只有四十萬分之一

如有任何查詢，請聯絡你的主診醫生

以上資料由瑪麗醫院放射科提供。



葛量洪醫院
Grantham Hospital



瑪麗醫院
Queen Mary Hospital



贊育醫院
Tsan Yuk Hospital

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MAGNETIC RESONANCE IMAGING



麥理浩復康院
MacLehose Medical
Rehabilitation Centre



SINCE 1870
TWGHs
東華醫院
Tung Wah Hospital
東華三院馮克敏醫院
Fung Yiu King Hospital



根德公爵夫人兒童醫院
Duchess of Kent Children's Hospital

MAGNETIC RESONANCE IMAGING

Introduction

Magnetic Resonance Imaging (MRI) makes use of a strong magnet, radio waves and computer system to form pictures or images of the body. A large part of your body is composed of water which contains hydrogen atoms. These atoms are slightly paramagnetic. By using a combination of magnetic fields and radio waves, we are able to detect signals from them. These signals are then converted by the computer into detailed images of various structures of the body. MRI is safe and there are no known hazards. Patient with the following conditions may not be suitable for an MRI examination:

- ◆ Patient with cardiac pacemaker and/or artificial heart valve
- ◆ Patient with metal implants in the organ
- ◆ Patients within the first three months of pregnancy

Preparation

- ◆ Please come on time for the appointment and allow four hours of

stay in the MRI department for completion of the examination.

- ◆ A written consent is required
- ◆ Paediatric patients should be accompanied by adults
- ◆ Fasting for 4 hours before the examination
- ◆ You will be asked to change into a hospital gown
- ◆ Patients attending head scans should use minimal make-up, especially eye make-up, as it will be shown on the images
- ◆ You must remove all metallic objects (e.g. keys, jewellery, watches, pins, eyeglasses and hearing aids)
- ◆ Credit cards must also be left in the locker as the magnetic data will be erased by the magnetic field
- ◆ You are advised not to bring along valuable belongings or large objects

Procedure

- ◆ The whole procedure is monitored by

a Radiologist

- ◆ The examination will take about one to two hours, but occasionally it may take longer
- ◆ You may receive an injection of contrast medium that enables the internal organs to be better shown
- ◆ You may also have a pulse monitor and / or electrocardiogram sensors attached
- ◆ You will lie awake on a sliding couch inside the magnet. Blankets will be provided to keep you warm and comfortable
- ◆ The actual scanning procedure occurs intermittently, please keep still and relax throughout the examination
- ◆ You will hear a regular drumming noise during the scanning. Ear plugs will be provided
- ◆ Sedative will be administered to paediatric patients in order to obtain images without body movement
- ◆ Our staff will be in constant contact

with you during the examination and you may talk to our staff

After the examination

You can eat or drink as usual after the examination. The report of your scan will be sent to your referring doctor.

Complications

MR contrast medium has been used safely in millions of patients. Serious life-threatening reactions are rare, and only been reported in about one in 400,000 patients. Minor reactions, such as headache or nausea occur in about 2% of patients.

Should you have any queries, please consult your doctor-in-charge

Information provided by the Department of Radiology, Queen Mary Hospital.