New 32-Channel Body Coils in HKBH MRI Scanners

The Hong Kong Baptist Hospital MRI Centre is well equipped with both the Siemens Avanto 1.5Tesla and Trio 3Tesla scanners using the Total Imaging Matrix (TIM) system. With TIM technology, coil setup for procedures on the MAGNETOM Avanto and Trio is easy and fast. Up to 102 seamlessly integrated matrix coil elements and up to 32 independent radiofrequency channels enable advanced clinical applications. The system provides unprecedented flexibility, accuracy and speed in magnetic resonance (MR) imaging.

Innovative Workflow and Applications

Improving patient throughput while further enhancing image quality — this is the challenge in clinical routine. Developments in coil technology and workflow are essential for meeting the requirements of faster MR imaging. New multi-channel coils provide faster exams and enhanced image quality. To keep pace with the new technology, our Centre has recently introduced 32-channel body coils in both the 1.5Tesla and 3Tesla scanners. The new coils are based on the Siemens TIM technology and have up to 32 channels. This ultra-high “density” of coil elements results in increased signal-to-noise ratio (SNR), as well as higher imaging speed with higher acceleration factors in parallel imaging (iPAT). The new 32-channel body coils thus provide excellent image quality in an even shorter examination time.

With the new 32-channel body coil, acquisition time is significantly reduced, which is especially beneficial in cardiac and abdominal imaging with shorter breath holding time. This means better patient comfort due to faster exams and workflow improvement.

32-Channel Body Coil

Product Overview

- 32-element coil with integrated 32 preamplifiers
- Coil designed in 16-element anterior part and 16-element posterior part
- Pods for more comfortable patient positioning
- No coil tuning is required
- iPAT-compatible

Clinical Applications

Cardiac MR Imaging

Advanced capabilities in cardiac magnetic resonance imaging with the 32-channel body coil: All cine sequences done in less than 11 seconds ensuring short breath-holds with no compromise in signal-to-noise ratio or spatial resolution
Abdominal MR Angiography

Clinical example using the 32-channel body coil: Coronal Maximum Intensity Projections (MIP) and axial MIP of high-resolution contrast-enhanced renal magnetic resonance angiography 3D FLASH acquired with 448 matrix and parallel acquisition technique (PAT) 3 in a single breath hold (16 seconds)

Liver MR Imaging

Clinical example using the 32-channel body coil: High-resolution magnetic resonance study of the liver with excellent image quality and high signal-to-noise ratio. The presence of a liver mass is well demonstrated

Pelvis MR Imaging

(A) Clinical example using the 32-channel body coil: Magnetic resonance image of the uterus with high signal-to-noise ratio

(B) Clinical example using the 32-channel body coil: Excellent high-resolution imaging of the prostate gland

Bibliography:

Radiology Department
I mentioned in a previous issue that to update the guideline on acute respiratory infections (ARIs), an extensive systematic review was conducted. Although the document is still in the drafting stage, there were 10 initial conclusions established and five were discussed in a previous issue of this Newsletter. The remaining five will now be summarised:

6. The use of the appropriate personal protective equipment (PPE) is recommended. This includes one or more of the following: medical mask; gloves; long-sleeved gowns; and eye protection (goggles or face shields). Risk assessment (according to the procedure and suspected pathogens) should be done before selecting the specific PPE. It is incorrect to wear any of these without a risk assessment. Research data provide the strongest support for the mask and, for general patient care procedures, the medical mask is not inferior to the N95.

7. A system for the triage and early identification of patients with ARIs was shown to be helpful in preventing transmission of respiratory infections both to healthcare workers (HCWs) and patients. It is strongly recommended by the WHO and already practiced in many Hong Kong hospitals.

8. Spatial separation from infected ARI patients will help reduce transmission to HCWs and other patients. The WHO systematic review indicates that at least 1m will be sufficient, and the WHO will retain this distance in all future recommendations.

9. Vaccination against influenza should be used for HCWs caring for patients at higher risk of severe complications to reduce influenza cases and mortality among these patients. However, the protective effects were predominately demonstrated in long-term care residents. This is a strong reason for caution against pushing the vaccination programme too far, by making it mandatory for all HCWs (eg, as a condition for employment).

10. Some countries are using ultraviolet germicidal irradiation (UVGI) for disinfection of the air in healthcare settings when care is provided to patients with ARIs. A careful systematic review shows that there is little to no evidence on its efficacy and, therefore, the WHO will state that "no recommendation is possible regarding UVGI".

Do read the 10 conclusions together, with the help of the previous issue of the Newsletter. Again, all comments and queries are welcomed. The WHO document is still being drafted and we can even direct your comments to them and you can perhaps help influence the world.

Dr Wing Hong SETO
Consultant Microbiologist (Part-time)

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6. "Epidemic and Pandemic Prone Acute Respiratory Disease in Healthcare".
Incomplete Prescription

Incomplete prescription is defined as any prescription that misses crucial information for dispensing and requires clarification and/or confirmation with prescribing doctors. Such incompletion could cause potential consequences in terms of medication incidents, unnecessary inconvenience to patients and workload increment.

Try to identify what has been missed in the following examples:

1) Anirapil 2 × 0.1g 3 × 0.4g 1 ×

2) 

3) Perindolol 50g × 4 × 5 × 3 ×

4) 

5) 

6) Carvedilol 1 × 0.1g

Incomplete prescriptions adversely affect the efficiency and safety of medical care. Doctors’ good prescribing practice in terms of awareness of incomplete prescriptions is crucial in attaining high-quality patient care.
Allow me to borrow Shakespeare’s wisdom as an entrée to an important issue in our practice — informed consent.

Informed consent involves explaining the indications of doing the procedure/operation for a particular patient; the outcome expected if the procedure/operation is or is not performed; highlighting the complications that might occur with the procedure/operation; and offering the choice of different treatment options and their relative benefits for the patient to deliberate. In the private sector, it is also advisable to mention the approximate cost involved in doing the procedure/operation to avoid future complaints.

The importance of having the above duly documented cannot be overemphasised since it provides the doctor with a solid piece of defensible evidence should any litigation occur. The documentation can be made either in the clinic notes or the inpatient medical record. On the other hand, the consent form now currently provided by the Hospital is a convenient means to have the consent documented and the information sheet for the specific procedure is invaluable to facilitate the process of explanation. As such, it is highly recommended that it is used for documentation of informed consent.

It is also important to have the right procedures written in the consent form because doing a procedure/operation not included in the consent form signed by the patient (or the guardian if the patient is not mentally competent) is extremely risky and not allowed in the Hospital, since the patient might not agree to it and the action would not be defensible should complications arise.

The proper way to avoid this is to make a good assessment of the patient’s clinical condition before the procedure/operation and include the probable procedures/operations in the consent form, which is duly signed by the patient or relative after a full explanation.

It is of course possible that some additional procedures/operations might be found necessary during the procedure/operation, and, in the best interest of the patient, should not or cannot be delayed. Under such circumstances, consent for the additional procedures/operations should be sought from the patient if possible (e.g., patients under local or spinal anaesthesia). If the patient is under sedation or anaesthesia and thus not mentally competent to give consent, consent should be sought from a guardian or next of kin (over the phone if they are not at the Hospital), be witnessed by our nurses and, of course, be documented in the consent form. If a relative cannot be contacted, the support of Hospital Management should be sought.

It is the unwavering duty of the Hospital to defend the rights of our patients, and obtaining proper informed consent will not only protect the patient but the doctor as well.

To do or not to do, that is NOT the only issue.

Dr Hoi Che LEE
Director
Medical Services
Surgeons

Colorectal Diseases Centre in a Private Hospital: A Summary of 4 Years Experience

Director of Programme: Dr Leung Tung YUNG
Speaker: Dr Steve Ching Wa LAM
Date: December 2, 2011
Time: 8:00 – 9:30 am
Venue: The Chapel, D9, HKBH
Enquiries: 2339 8872 (Ms Connie LOK)
Coming Meetings: January 6, 2012
February 3, 2012
March 2, 2012

Physicians

Session A: Updates in Acute Stroke Management
Session B: Management of Hypertension & Stroke Prevention in the Very Elderly

Director of Programme: Dr Peter C Y WONG
Chairman: Dr Peter C Y WONG
Speakers: Dr Tak Hong TSOI (Session A)
Dr Chun Keung MOK (Session B)
Date: December 5, 2011
Time: 8:00 – 10:00 pm
Venue: The Chapel, D9, HKBH
Enquiries: 2339 8873 (Ms Polly TAM)
Coming Meetings: January 9, 2012
February 6, 2012
March 5, 2012

Obstetricians & Gynaecologists

Morbidity Meeting: Caesarean Delivery

Speakers: Dr Ho Leung MAK / Dr Nancy Lai Ling FOK
Date: December 13, 2011
Time: 7:30 – 8:30 pm
Venue: The Chapel, D9, HKBH
Enquiries: 2339 8872 (Ms Connie LOK)
Coming Meetings: January 17, 2012
February 14, 2012
March 13, 2012

Surgical Pathology

Joint Surgical Pathology Meeting

Co-ordinator: Dr Tai Yum LEE
Date: December 16, 2011
Time: 8:00 – 9:00 am
Venue: The Chapel, D9, HKBH
Enquiries: 2339 8872 (Ms Connie LOK)
Coming Meetings: January 20, 2012
February 17, 2012
March 16, 2012

Who’s NEW

Dr Patricia Che Mun POON
Resident Consultant in Clinical Oncology

We are delighted to announce that Dr Patricia Che Mun POON joined us as Resident Consultant in Clinical Oncology on November 3, 2011. Dr POON is a clinical oncology specialist with extensive experience in the treatment of a vast spectrum of cancers. Before joining HKBH, Dr POON served at Queen Elizabeth Hospital for over 15 years. Dr POON is also highly qualified in the field of palliative medicine as she attained a Diploma in Palliative Medicine from Cardiff University (HK) in 2009.

Editorial Enquiry

We would like to hear from you! Any questions, comments or suggestions are always welcomed. Please email us at pr@hkbh.org.hk

Cast all your anxiety on him because he cares for you. 1 Peter 5:7 (NIV)