General MRI Rotation

Goals & Objectives CanMeds

UBCH

Level: PGY 2-5

Rotation Supervisor: Dr. Gordon Andrews

The general MRI rotation at UBCH accommodates PGY 2-5 residents and residents are expected to develop graded responsibility as they rise from first to fourth year level. Guidance will be given to each resident at the commencement of the rotation, an interim evaluation will occur halfway through the rotation, and a final evaluation will be given at the end of each rotation. Each final evaluation will be submitted to the residency training program director.

Graded responsibility is emphasized on the MRI rotation, with junior residents expected to concentrate on normal anatomy. They should strive to report 10-15 cases daily, primarily studies less complex in nature. There should be a balance between MSK and Neuro cases that are undertaken. Additionally, junior residents will be responsible in learning appropriate techniques in MR-related arthrography as well as other MSK procedures that are performed occasionally in the department. Fourth year residents are expected to review and report at least 15 cases daily, with a balance between body regions, and with varying case complexity.

All residents are expected to arrive in the department by 0800 hours and stay until the conclusion of the working day, approximately 1730 hours. Ongoing teaching and interaction with staff occurs throughout the day. If a resident is absent from this rotation for any reason, he/she should give ample warning to the Radiologist scheduled for that day. Vacation and conference requests must be booked with Dr. Andrews in advance, at least two weeks prior to any planned absence from the rotation.

Residents are required to submit two teaching files by the end of the rotation.

Medical Expert:

· To acquire knowledge in MR physics including:

§ understanding and being able to apply basic MR physics principles of spin echo, gradient echo (in and out of phase, 2D and 3D) and DWI sequences

§ understand factors affecting signal-to-noise ratio, spatial resolution and imaging time

§ recognize common MRI artifacts and be able to reduce (or eliminate) them

understand ancillary techniques such as fat suppression, spoiler gradients, saturation bands, and flow compensation

To learn about MR safety, including:

risks of contrast administration

knowledge of screening/contraindications, foreign implanted bodies

To know the cross sectional MR and multi-planar anatomy

To acquire knowledge in clinical radiology and pathology

To be able to detects findings and interpret the findings into an appropriate differential diagnosis

To be able to summarize cases, offer recommendations, and understand treatment and clinical implications of each case.

Communicator:

Be able to establish therapeutic relationship with patients/families

Obtain and synthesize relevant history from patients/families/communities

Listen effectively

Communicate effectively with patients, families and other health professionals.

Demonstrate appropriate and timely communication of findings to referring physicians

Give accurate, concise, complete reports

Collaborator

Respects, recognizes the roles of, and consult effectively with the healthcare team, including nurses and technologists

Contribute effectively to other interdisciplinary team activities

LEADER ROLE:

Implement processes to ensure personal practice improvement

Set priorities and manage time to integrate practice and personal life

Apply the science of quality improvement (ie discussion of potential audit) to contribute to improving

systems of patient care

Contribute to a culture that promotes patient safety, including recognition of patient safety issues, and utilization of health informatics to improve patient safety

Demonstrate leadership skills to enhance health care

Health Advocate

Understand the benefits and limitations/risks related to MR imaging and respective contrast agents.

Understands the appropriate use of MR and rationalization of use of imaging resources

Scholar

Effectively teaches others, including residents, medical students, patients and other health professionals

Demonstrates continuous self-directed learning (reads around cases and topics)

Submit two teaching files to the digital library.

Demonstrates evidence based medical approach and critical appraisal with regards to radiology literature

Develop, implement and monitor a personal continuing education strategy

Contribute to development of new knowledge

Professional

Deliver highest quality care with integrity, honesty and compassion

Exhibit appropriate personal and interpersonal professional behaviors

Practice medicine ethically consistent with obligations of a physician

Demonstrate insight with regards to own limitations, strength and weaknesses, asks for help when appropriate

Be accepting of constructive criticism

Recommended Textbooks:

-MRI in Orthopedics and Sports Medicine. Stoller

-Diagnostic Neuroradiology. Osborn

-The Physics of Clinical MRI Taught Through Images. Runge