Pediatric Imaging Protocols

Schedule an appointment
Please call Central Scheduling at (414) 607-5280 or (877) 607-5280
Please fax orders to (414) 607-5288

Diagnostic protocols
- Every CT, MR, NM, IR and fluoroscopy order is evaluated and protocoled by the radiologist.
- If there is an unusual order for other modalities, these are brought to the attention of the radiologist by the technologist.
- To speak to a radiologist, please call us at (414) 266-3225.

Ordering guidelines
Computed Tomography (CT):
- Chest
- Calcification (Renal Stone)
- Trauma
- Intra-abdominal or pelvic abscess
- +/- Bowel (with oral contrast)
- Abdominal Mass (MR usually better)
- CTAngiography Vascular Imaging

Ultrasound (US):
- Screening exam for solid organ mass
- Renal
- Doppler Vascular Imaging
- Testes / Ovaries
- DDH
- NICU Head
- Screening for fluid or fluid collection
- Gall bladder

Magnetic Resonance (MR):
- Neuro
- Musculoskeletal
- Abdomen
- Chest Wall and Mediastinal lesions
- Bowel for IBD
- MR Angiography Vascular Imaging
- Cardiac MRI

Nuclear Medicine (NM):
- Metastatic disease
- (Bone Scan / PETCT/ MIBG / FDG)
- Follow-up for VUR
- Gastric Emptying
- Reflux
- Fever unknown origin (indium)

Bone lesions
- History / Physical / Plain Films
- Less than two years of age: Bone Scan
- Plain Films Positive
  - MR for staging, abscess, soft tissue injury
  - CBTony fragments, +/- loose bodies
- Plain Films Negative
  - MR
  - If osteoid osteoma suspected, CT or MR

Hip US for DDH
- Initial evaluation with US is preferred. This should be done preferably at the age of 4 to 6 weeks
to avoid imaging patients with physiologic laxity. Earlier imaging only in patients with abnormal
physical exam of “clunks”.
- Patients 4 months or older should be evaluated with AP pelvic radiographs (Evaluation with US
is limited due to ossification of the femoral heads).
Craniosynostosis
- If facial deformity or a bony ridge is found on physical exam, these patients should be evaluated with non contrast head CT, and add in comments that 3D formats are required.

Knee Pain
- Start with AP and lateral knee radiographs. Check Sunrise view if patellar pain. If negative, an MRI would be appropriate.

Vesicoureteral Reflux (VUR)
The rationale for comprehensive imaging studies following the first febrile Urinary Track Infection (UTI) has been based on:
- Uncertainty as to whether the first documented UTI is truly the first UTI
- Young children who have a UTI are highly likely to develop a second infection
- VUR is found in 20-40% of children with UTI
- Obstructive lesions are found in 0-4%
- Young children have the greatest risk of renal scarring
- Repeated infections can lead to additional renal scarring

UTI / VUR

UTI
- Febrile or < age one
  - RUS
  - VCUG
  - RUS abnormal
  - Stop
  - VCUG
- Non-febrile or > age one
  - RUS normal

Indications for DMSA scan
- Evaluation of acute pyelonephritis
- Evaluation for renal scarring
- Evaluation of function

Indications for NM cystogram
- Screening study
- Follow-up of uncomplicated vesico-ureteral reflux

Protocols of Appendicitis

Not 100% sure
- US
  - Possible ovarian etiology
  - Suspect IBD or abscess
    - Negative
      - CT
    - Positive
      - CT
- Positive
  - Positive
    - Surgery Consult
  - Negative

Imaging Contact Information
Office phone: (414) 266-3100
Test results: (414) 266-3225
chw.org/imaging

Data source:
Shelia Moore, MD and Carla Quijano, MD
UTI Algorithm courtesy of Charles Durkee, MD
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