

MRI Contrast - Dosing Protocol

Purpose:

To provide a written Protocol for studies to detail MRI Contrast Administration based on Study Type and eGFR.

Definitions:

MRI- Magnetic Resonance Imaging

eGFR- Estimated glomerular filtration rate calculated by the abbreviated MDRD equation: $(186 \times (\text{Creatinine}/88.4)^{-1.154} \times (\text{Age})^{-0.203} \times (0.742 \text{ if female}) \times (1.210 \text{ if African American})$

Group I agents: Not currently approved for use at Sentara

Group II agents: Multihance® (gadobenate dimeglumine), and Dotarem® (gadoterate meglumine).

Group III agents: Eovist® gadoxetate disodium.

| Procedure | Supplemental Guidance |
|--|---|
| 1. Evaluate patients risk for suspected kidney problems. | <ul style="list-style-type: none"> ▪ JA-C004 Prevention of NSF with Gadolinium based MRI Contrast Agents. |
| <p>2. For Patients Not determined to be at risk for kidney problems and/or patients with a eGFR >40 the following contrast agent/strength will be utilized:</p> <p>Group II agent Full Dose- ALL Studies (MRI, MRA and MRI Breast) MR Arthrograms- Multihance 0.1 mL/20 mL</p> <p>Note: If patient unable to tolerate Dotarem previous-reaction to Dotarem– may use Full Dose Multihance®- when there is an eGFR above 40.</p> | <ul style="list-style-type: none"> ▪ See Multihance®, and Dotarem®- Package Insert for Dosing Instructions ▪ Note: Although our contrast agents are low risk- Please provide the following Education tool for All Patients with a eGFR ≤ 60: Patient Education – Gadolinium Based MRI Contrast Agent/Medication –JA-C013 |

| Procedure | Supplemental Guidance |
|--|---|
| <p>3. For patients with a eGFR 30-40 the following contrast agent/strength will be utilized:</p> <p>All MR/MRA Exams - Dotarem®- Full Dose</p> <p>MRI Breast- Multihance®- Full Dose</p> <p>Note: If patient unable to tolerate Dotarem®/previous reaction to Dotarem®- may use Multihance®- Half Dose.</p> | <ul style="list-style-type: none"> ▪ See Multihance®, and Dotarem®-- Package Insert for Dosing Instructions ▪ Note: Although our contrast agents are low risk- Please provide the following Education tool for All Patients with a eGFR ≤ 60: Patient Education – Gadolinium Based MRI Contrast Agent/Medication –JA-C013 |
| <p>4. For patients with an- eGFR <30: CALL Radiologist for consideration of the following:</p> <p>½ Dose Multihance or Dotarem®- Full Dose</p> | <p>The Radiologist Must be called PRIOR to administering Contrast if any of the below criteria are met:</p> <ol style="list-style-type: none"> 1. The patient has severe renal disease (i.e. the patient is on dialysis) AND this would be the fourth or more lifetime contrast-enhanced MR exam for this patient. <p style="text-align: center;">OR</p> <ol style="list-style-type: none"> 2. Acute Renal Failure-Patient Not on Dialysis and Not Making Urine (Anuric). <ul style="list-style-type: none"> ▪ For the patients on dialysis, the technologists will verify, prior to giving any gadolinium based contrast agent, that the patient or ordering MD confirms that the patient is scheduled for dialysis no later than 24-36 hours after injection. In any case where the dialysis arrangements are not documented prior to scanning, the technologist must contact the Radiologist responsible for MRI service at the time of scanning and the Radiologist/Technologist must ensure that the referring service is taking responsibility for arranging the dialysis, prior to the MRI scan being performed. MRI Technologist will confirm this appointment and document in progress notes Details (Dialysis site/appointment date/time/who they spoke with). |