

MRI Intravenous Contrast

Your health care provider has requested an MRI scan with the injection of a gadolinium based contrast agent (GBCA) into the body. The contrast will be given through a small needle placed into a vein. The contrast improves the diagnostic accuracy of the MRI scan compared to an exam without using a GBCA. Unlike contrast agents used in X-rays or CT scans, MRI contrast agents do not contain iodine and rarely cause allergic reactions or other problems. GBCA have been in clinical use in the United States for 30 years. Hundreds of millions of doses of GBCA have been given to patients throughout the world since these agents were first developed and approved for use in 1988.

A tiny amount of the gadolinium within the GBCA can stay in several parts of the body for months or years. The possible long-term effects of this have not yet been determined. Currently all studies have found no harmful effects from this retention. There are different types/brands of GBCA that can be used for your MRI exam. The amount of gadolinium that stays in the human body differs among the available types/brands. Some of the available GBCA seem to leave more gadolinium in the body than others. They may also be able to find smaller and/or earlier abnormalities than other GBCA at the same given dose. They may have other safety advantages.

The following complications are possible anytime an injection is given: minor pain, bruising, swelling or infection. In rare cases (0.07% to 2.4%), contrast agents can cause adverse reactions.

The most common reactions are mild. Examples include headache, dizziness, nausea and itching. More serious reactions include trouble breathing and swelling of the lips, occurring in less than 0.01% of cases. Allergic reactions will tend to occur right away. Serious reactions may require emergency treatment including medication. Fatal reactions to gadolinium can occur but are extremely rare.

If you have not had a recent blood test to check your kidney function, a finger stick blood test may be done just prior to your MRI exam. With normal kidney function, most of the gadolinium is removed from your body in the urine within 24 hours.

If you have acute renal failure or severe chronic kidney disease and receive a gadolinium-based contrast agent, there may be a very small risk of developing a rare condition. This is called Nephrogenic Systemic Fibrosis (NSF). There have been no reports of NSF among patients with normal kidney function or those with mild to moderate kidney disease.

If you are pregnant or think you may be pregnant, please inform the technologist.

If you are breast feeding, it is safe to continue breast feeding after the contrast has been given. The amount of contrast used is small and is rapidly removed from your body, thus representing no danger to your child.

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