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MRI scans: Do they still trigger claustrophobia?

By Sion Rogers

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Magnetic resonance imaging, a diagnostic tool that scans the body using powerful magnets, has revolutionized modern medicine in the 30 years since it was introduced. The scanners can find tumors and other medical problems before they become deadly.

As with many things, though, the solution sometimes creates problems of its own. In this case, it is MRI claustrophobia, in which patients having an MRI are seized by anxiety attacks so severe that they sometimes try to crawl out of the machine or require anti-anxiety drugs to get through the scans. Some patients are so afraid they refuse medically necessary scans.

"I was feeling anxious about getting in the car and even going there," said Kim Blarimore, a 55-year-old from Columbus, Ga., of an MRI scan three years ago. "The thought of being stuck in that chamber made me sick." As her breathing became shallow, the MRI technicians tried to talk her through it, to no avail. Only the anti-anxiety drug Xanax, prescribed by her doctor for this eventuality, was of any help.

MRI practitioners say they frequently see similar reactions. One 1998 study by the department of psychology at the University of British Columbia examined the level of fear induced in 80 adults undergoing their first MRIs; 25 percent experienced moderate to severe anxiety.

Technicians don't have much time to head off such incidents. "Most panic attacks begin with the patient screaming, 'Get me out of here!' and then trying to crawl out of the unit," said Dr. Steven Sommerville of NEWisconsin MRI Center in Green Bay, Wis. "Worried patients start to breathe erratically. As less oxygen goes to the brain, the patient's heart rate goes up and they become hot and sweaty."

One MRI expert, Dr. Justin Pearlman from Dartmouth College, is aware of the underlying reasons for MRI claustrophobia and suggests ways to overcome it.

"The patients notice a change in environment and loss of sense of liberty that disturbs them," he said. "It is very similar to the feelings some people notice when they look over an edge from a high place. If the feeling is intense, some people can choose either to accept the feelings knowing there is no harm, or they can distance themselves by closing their eyes and thinking of lying on a beach."

In addition to thinking calming thoughts, anxiety levels can be dramatically reduced if the patient is thoroughly briefed before the procedure, said Dr. Jeannette Goss, of ImageOne MRI Center in Kelowna, Canada. "At good scanning facilities the technologist helps to relax the patient prior to the scan," Goss said. "The patient is given information prior to their appointment on what to expect."

Careful screening helps, too, Sommerville says, allowing him to identify those patients who will require sedation.

The latest generation of MRI scanners has larger openings than earlier versions of the device, which were shaped like tubes and were a tight fit for many patients. (Although more open scanners began to be available a decade ago, the images were not as reliable.)

The Fonar Group, which introduced the first-ever commercial MRI in 1980, has now developed the Upright MRI scanner, which allows patients to simply walk in and be scanned. The company, based in Melville, N.Y., has dubbed its product "The Only True Open MRI" and claims that the image resolution is far better than earlier machines.

"With regards to spinal imaging, our scanner is better than conventional MRI," said Dan Culver, a spokesman for Fonar. "The only area where our images aren't as clear is with the vascular system." The Upright MRI scanner has had a dramatic effect on people suffering from claustrophobia. With conventional MRIs, one in five people refused scans, the firm's studies showed. "With our open scanner, that figure has nearly dropped to zero," Culver said.

Another research team, at the Harvard-Smithsonian Center in Cambridge, Mass., is developing another variant on the open MRI scanner that focuses on lung disease. "The patient can simply walk in or sit down to be scanned," said Ronald Walsworth, the research team leader.

While still in the pre-clinical stage, the scanner uses weaker magnets than a conventional MRI, but requires that the patient inhale magnetized gases like helium or xenon through a plastic tube, which enter the patient's lung and interact with the magnetic fields to produce images, Walsworth said.

So do sufferers like Kim Blarimore feel more at ease about having MRI scans in future? "I don't think I could go through that again," Blarimore said. "But I would definitely consider going for an open MRI."

E-mail: ser2129@columbia.edu