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Reducing Occurrences of MR-related Claustrophobia in Patients With PTSD

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Patients have compared the magnetic resonance (MR) imaging procedure to being locked in a closet, smothered under a mattress, closed in a locker, and getting trapped in a pipe, to name a few. Although these statements might seem exaggerated, anxiety-related reactions reportedly occur in 4% to 30% of patients undergoing imaging.¹ Experiencing some level of anxiety about an MR procedure is common for patients—especially for those who have never had an examination—but for some, such as those who have post-traumatic stress disorder (PTSD), the MR procedure triggers a severe level of anxiety or fear.

PTSD and Claustrophobia Symptoms

PTSD is a serious psychological condition that can cause an extreme reaction during imaging. In combination with other anxiety-related conditions, such as claustrophobia, PTSD can make an MR examination seem unbearable. Patients typically develop PTSD after experiencing a terrifying, shocking, or dangerous event, such as military combat or a serious car accident.² ³ Although experiencing fear during a traumatic event is natural, continuing to experience a fight-or-flight reaction even in the absence of danger might be a sign of PTSD. Symptoms of PTSD include⁴:

- Anxiety or uneasiness.
- Fear.

A combination of the confining nature of the MR scanner, the loud noise it generates, and the feeling of not being in control can incite severe symptoms in patients who have PTSD.

Claustrophobia is an extreme or irrational fear of confined places that is common in people with PTSD.⁴ Its symptoms include⁵:

- Nausea.
- Hyperventilation.
- Sweating.
- Hot flashes.
- Painting.
- Rapid pulse rate.
- Increased blood pressure.
- Desire to escape a situation.

The typical small bore opening of the scanner and the traditionally lengthy procedure make claustrophobic episodes common in MR departments.⁴ The closeness of the patient’s head to the inner wall of the scanner can be upsetting to some people. Even some patients undergoing scans of their lower extremities experience claustrophobia. Approximately 2 million MR procedures worldwide are aborted because of claustrophobia.⁷ For patients who experience PTSD or claustrophobia, the MR environment can be extremely distressing, making imaging challenging for radiologic technologists. Therefore, information about patient anxiety
related to PTSD or claustrophobia should be relayed to the technologist performing the MR procedure as early as possible so that he or she can take the appropriate steps to ease these anxieties and perform the procedure.

**Reducing Patient Anxiety**

Inaccurate information—relayed through a friend or family member who had a negative MR experience or from watching a television program that depicts MR imaging procedures inaccurately—fuels negative feelings in patients who are already nervous and makes the stressful situation worse. Technologists have a variety of methods to alert them to a patient’s distress and then to take action to ease that distress.

**Phone Screens**

Interventions that reduce patient anxiety or fear about the MR procedure can be effective for patients who have PTSD or claustrophobia, and imaging professionals can implement many of them before the patient comes into the clinic. The majority of MR examinations are nonemergent, and patients often are screened by phone before they receive an appointment to be scanned. This approach provides technologists with their first opportunity to ease patient anxiety by providing accurate information about the procedure and answering questions.

**Verbal Clues**

The best clue, of course, is the patient saying, “I am nervous about this examination.” However, other clues include statements such as, “I have heard so many bad things about this” or “I do not think I can do this.” In addition to listening to the words spoken, the technologist should listen for verbal indications of apprehension or fear in the patient’s tone of voice.

**Nonverbal Clues**

Radiologic technologists should watch for various nonverbal clues that indicate patients are fearful or anxious about the procedure. The technologist who notices these signs can address them more quickly and screen for claustrophobia or PTSD. For example, when patients enter the scanner room, the technologist should watch their eye movements. Some claustrophobic patients repeatedly look at the bore as though questioning whether they will fit; they might even make remarks about the narrow bore. Other patients will not look at the opening at all.

In addition, people who are fearful about the procedure tend to react slowly to basic instructions; therefore, technologists might need to repeat their requests. Some patients also might display flushing of the face, an increased heart rate (they tend to verbalize this condition), increased respiration, sweating, a sudden need to use the restroom, or suddenly feel ill.

**Gaining Trust**

It is important to gain the trust of patients. Answering all of a patient’s questions and addressing each of his or her concerns will help gain that trust as well as alleviate apprehension; however, providing ambiguous or deceptive information will destroy trust. Therefore, the technologist should provide a thorough explanation of the examination, including descriptions of the examination room, the sights and sounds the patient will see and hear, and the sensations he or she will feel, right down to the room temperature.

A peaceful and caring environment goes a long way toward soothing patients with anxiety. A technologist can ease the situation by speaking calmly to the patient and not rushing him or her. One of the best ways to help apprehensive patients is to give them the power to decide whether to undergo or refuse the examination. Assure them that it is their decision and that they will not be forced into it. This control often gives them the confidence they need to move forward with the examination.

**Additional Solutions**

Allowing patients to place a cloth over their eyes during the procedure is a basic way to combat claustrophobia because it helps patients ignore how close the inside of the scanner is to their faces, which likely makes them feel less confined. Some patients find that using audio and video systems distracts them from the confining space of the scanner and helps pass the time. Olfactory stimuli such as aromatherapy in the form of lavender- or cucumber-scented stickers also can reduce patient anxiety. Specially designed prism glasses enable
patients (dependent on body habitus) to see out of the scanner. Further, patients who know they are likely to experience anxiety-related reactions in the MR environment might obtain medication from their provider in advance of the examination to help them relax enough to complete it.

Conclusion
Patients with PTSD might experience claustrophobia so severe they are unable to complete MR examinations. These aborted examinations affect health outcomes and lead to loss of time and revenue in the health care industry. Each patient has different needs, expectations, perceptions, and feelings. Interacting with anxious or fearful patients is an everyday occurrence for MR technologists. Technologists who can remain positive, calm, and reassuring, while adapting to the needs of their patients regardless of their underlying psychological conditions, are likely to experience the best patient outcomes.

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References