



## Caring for Patients with Posttraumatic Stress Disorder During Gastrointestinal Procedures

**C**onscious sedation involves the use of pain relievers and sedatives in order to induce a state of consciousness in which a patient's pain and discomfort are absent or minimized. The goal is for patients to be able to hear, speak, and respond to health care providers throughout the procedure.<sup>1</sup> Inherent to conscious sedation is a loss of control on the part of the patient.

About 3,500 gastrointestinal (GI) procedures are performed per year using conscious sedation at George E. Wahlen VA Medical Center (GWVAMC), Salt Lake City, UT. Over a two-year period, GI nursing staff noted about 30 patients experiencing disproportionate reactions to the procedures or to the medications. These reactions consisted of severe agitation during the procedure that could not be explained by the process of the procedure itself. The agitation could not be resolved with explanations from the nurse or physician that were intended to calm and comfort the patient. For example, during one uncomplicated colonoscopy, the patient kept yelling, "Stop! Stop!" Neither explanations to the patient that the procedure was going well and that he was fine nor efforts to comfort him were sufficient. A subsequent check of the patient's medical record revealed a history of object rape. This finding prompted retrospective medical record reviews of other patients who had experi-

enced disproportionate reactions to GI procedures. We found that all of the patients had a diagnosis of either posttraumatic stress disorder (PTSD) or sexual assault trauma (SAT).

In response to this finding, we carried out a project to determine (1) if anything about performing GI procedures, such as colonoscopy and esophagoduodenoscopy, could trigger episodes of PTSD and (2) whether nursing staff could reduce the disproportionate reactions to GI procedures in patients with PTSD or SAT by addressing their problems before the procedures. Before embarking on any changes in procedure, we conducted a literature search into the subjects of PTSD, sexual assault, and GI procedures.

### PTSD AND SEXUAL ASSAULT

The National Center for PTSD defines the condition as "an anxiety disorder that can occur after you have been through a traumatic event... During this type of event, you think that your life or the lives of others are in danger. You may feel afraid or feel that you have no control over what is happening."<sup>2</sup> The center also says that PTSD can develop when any person experiences an event that is perceived as life threatening—such as (1) combat or military exposure, (2) childhood sexual or physical abuse, (3) adult sexual or physical assault, (4) a terrorist attack, (5) a serious accident, or (6) a natural disaster.<sup>2</sup> While civilian or veteran patients at any hospital may have experienced four of these six categories, veteran patients have a higher risk of experiencing combat or terrorist activity.

Compared to men, women are at heightened risk for sexual or physical assault. In fact, some researchers estimate that one out of four women will be the victim of a sexual assault in her lifetime.<sup>3</sup> Female veterans are at even greater risk, with recent research reporting a sexual assault prevalence as high as 41% among this population.<sup>4,5</sup> Furthermore, since women are being deployed into combat zones increasingly, they are at greater risk for exposure to combat stress than they have been in the past.

Although female veterans are at greater risk for sexual assault, 3% to 4.2% of male veterans also have been subjected to it.<sup>4,5</sup> In addition, as male veterans outnumber female veterans, more than half (54%) of all VA patients who screen positive for sexual trauma are men.<sup>6</sup>

Certain stimuli—frequently referred to as "triggers"—can cause patients with PTSD or SAT to reexperience the initial traumatic event that led to the disorder. For the purpose of this column, we define a trigger as any sensory stimulant that produces the memory or recall of a specific event—in this case, the initial traumatic event that caused the patient's PTSD or SAT. Such stimuli can take the form of smells (such as perfume, body fluids, or anesthesia), sounds (such as music, environmental noise, or staff chatter) tactile stimuli (such as the feel of an object or a change in temperature) sights (such as steady or flashing lights, colors, or structures), and tastes (such as intravenous anesthesia, food, or drink).

Many of these triggers have the potential to affect patients with PTSD

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or SAT while they undergo a GI procedure. For instance, within our GI laboratory, we have witnessed the loud closing of a book (simulating a gunshot), staff chatter during a procedure (simulating battle noise), and background music from the 1960s (reminding a patient of his or her experiences in Vietnam) invoke a disproportionate reaction in a patient undergoing a GI procedure. Despite our observations and the extensive body of literature about PTSD and sexual assault, a thorough review of the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and MEDCO databases revealed no publications discussing the combined effects of conscious sedation and GI procedures on PTSD or SAT exacerbation. In fact, in their 2007 article, Kakhnovets and Holohan state that scientific literature in the area of male rape “is scant.”<sup>5</sup> And Kutter and colleagues note, “there has been minimal empiric investigation into whether PTSD symptoms fluctuate following exposure to subsequent trauma.”<sup>6</sup> They also say, however, that “studies suggest that combat veterans, especially those with PTSD, may be ‘retraumatized’ by reminders of their own combat experiences and by the threat of war.”<sup>6</sup>

With regard to the physiologic processes that underlie retraumatization in combat PTSD, Grant describes how the initial exposure to trauma results in a heightening of the body’s “complex stress response system.”<sup>7</sup> Once heightened, this system “interacts continually with the memories, thoughts, and feelings from the combat experience in such a way that fuels or exacerbates such symptoms as nightmares, interrupted sleep patterns, anger problems, depression, and flashbacks, forming the basis of PTSD.”<sup>7</sup> In this way, an otherwise negligible noise or appropriate touch could act as a trigger, even when expe-

rienced within the “safe” environment of a GI laboratory in the overall context of undergoing a necessary medical procedure.

### CHANGING OUR PROCEDURES

The principle investigator (PI), a staff nurse within the GI laboratory, consulted the facility’s PTSD treatment team to explain the observations made of patients with PTSD during GI pro-

cedures. She considered the team’s feedback, previous anecdotal observations of the nursing staff, and past input from patients with PTSD who underwent the GI procedures in order to formulate four simple, direct questions for improving patient care. Two of these questions were added to the current preprocedure conscious sedation assessment: (1) “Is there anything you can think of that we are going to do that could trigger a problem for you?” and (2) “What things should we avoid doing (such as loud noise, touching, light, darkness, odors, music)?” The other two questions were added to the discharge procedure: (1) “Did you have any problems during the procedure in regard to your PTSD?” and (2) “What can we do to improve your experience?”

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The proposed project was presented to the GI nursing staff, who were asked to assist in collecting the data. The PI also reviewed for the nursing staff the possible behavior of patients with PTSD or SAT and discussed possible triggers that might

be specific to the overall GI laboratory environment and individual GI procedures. Data were collected in each patient’s chart and on a research log. The PI flagged the charts of all patients diagnosed with PTSD or SAT who were scheduled to present to the GI laboratory between June and September 2008. When those patients arrived for their appointments, their diagnoses were addressed one-on-one

by nursing staff in the following manner: “I notice that PTSD is listed on your problem list. Think about what we do. We will give you medication for pain and sedation that can leave you in a ‘twilight sleep’ and then insert a scope through your rectum or into your throat (or both). Is there anything you can think of that we are going to do that could trigger a problem for you? What things should we avoid doing (such as loud noises)?”

Nursing staff in the procedure room were made aware of any triggers and actions identified by the patient that should be avoided. Nurses were asked to reorient the patient to time, place, and person if he or she awakened in a disoriented state. For patients with SAT, the nursing staff minimized chatter and laughing during the procedure. Modesty was provided for all patients as usual. If the patient had a disproportionate reaction (defined as agitated behavior unaccounted for by the procedure’s progress) during the procedure, it was documented. At the end of the procedure—after

it was determined that the patient was awake, alert, and oriented—the recovery room nurse asked the two discharge procedure questions.

### MAKING A DIFFERENCE IN PATIENT CARE

A total of 31 patients with PTSD—29 men and two women—presented for a GI procedure during our project timeframe. Three of the men also had been diagnosed with SAT. Fifteen participants identified triggers for their episodes of PTSD exacerbation: nine identified loud noises, five identified touch, and one patient identified the feeling of being out of control.

One male patient originally denied having any triggers but later said that he had been raped while in the military. He said he was able to go to his “happy place” during the procedure. A female patient stated her PTSD was from childhood experiences in Germany during World War II. One patient who had been a prisoner of war reported having had nightmares recently and asked not to be sedated heavily, as he did not want the feeling of loss of control during his procedure. All three of these patients reported that the preprocedure questions helped them to tolerate or prepare for the procedure.

In response to the questions asked at the end of the recovery process, only one patient had a negative response. He stated that he had hoped to sleep through the entire procedure but had awakened during the procedure with anxiety. All other patients reported no problems during the procedures and were generally pleased with the process.

### GOING FORWARD

The results of this study have changed our nursing practice. The GI preprocedure conscious sedation assessment has been adjusted to include the two questions regarding triggers, and all

patients, whether or not they have been diagnosed with PTSD or SAT, are now asked these questions. We still flag the medical records of patients with a recorded diagnosis of PTSD or SAT. And nurses continue to ask these patients the two recovery questions as they are being discharged.

Although we don't have formal data on the number of patients with PTSD or SAT experiencing disproportionate reactions to the GI procedures, nursing staff have reported anecdotally that this number has decreased since the institution of the additional questions. The nursing staff also says that, by addressing the issue of PTSD

Although there was no diagnosis of PTSD or SAT in his medical record, an incident of object rape was recorded there. And after he recovered from the anesthesia of the procedure, he said that he had been raped earlier in his life. Therefore, the results of this study may suggest that patients without a diagnosis of PTSD or SAT, but with disproportionate reactions to procedures using conscious sedation, should (1) be referred to their primary care provider for further assessment for PTSD or SAT and (2) be offered counseling or assistance in dealing with PTSD or SAT if the assessments suggest those diagnoses.

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or SAT before the GI procedures, patients appear to tolerate the procedures better and report feeling calmer during their overall experience. In fact, one patient reported how much he appreciated having those questions asked prior to his procedure by telling staff, “Thank you. You are the only people who have ever asked.”

Now that the nursing staff is aware that PTSD and SAT may initiate agitation or disproportionate reactions in patients receiving GI procedures, they question whether some patients who demonstrate these symptoms may indeed have undiagnosed PTSD or SAT. One example is the patient who was very agitated and kept yelling, “Stop! Stop!” during a colonoscopy.

A diagnosis of PTSD or SAT is as much a part of a patient's overall health as is his or her cardiac, pulmonary, or orthopedic problems. The diagnosis should be acknowledged and accommodated as a factor that has ramifications for the patient as a whole. With this in mind, other departments at the GWVAMC that use conscious sedation (including surgical and medical intensive care, same day surgery, and the angiocatheterization laboratory) have begun using the additional assessment procedures adopted by the GI laboratory. Regardless of formal diagnosis of PTSD or SAT, notations on the patient's chart should be made with regard to the patient's responses to the PTSD-related questions on the

preprocedure and discharge assessments and any disproportionate reactions that occur during the GI procedure. Such notations can help providers to accommodate patients during future procedures that use conscious sedation. ●

#### Author disclosures

The authors report no actual or potential conflicts of interest with regard to this column.

#### Disclaimer

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#### REFERENCES

1. Council for Public Interest in Anesthesia. *Conscious Sedation. What Patients Should Expect*. Park Ridge, IL: Council for Public Interest in Anesthesia. [http://www.aana.com/uploadedFiles/For\\_Patients/sedation\\_brochure03.pdf](http://www.aana.com/uploadedFiles/For_Patients/sedation_brochure03.pdf). Accessed December 1, 2009.
2. Hamblen J. *What is PTSD? A Handout from the National Center for PTSD*. Washington, DC: National Center for PTSD, US Dept of Veterans Affairs. [http://www.ptsd.va.gov/public/pages/handouts-pdf/handout\\_What\\_is\\_PTSd.pdf](http://www.ptsd.va.gov/public/pages/handouts-pdf/handout_What_is_PTSd.pdf). Accessed November 11, 2009.
3. Dickson M. Rape, the most intimate of crimes. PBS web site. <http://www.pbs.org/kued/nosafeplace/articles/rapefeat.html>. Published 1996. Accessed November 11, 2009.
4. Martin L, Rosen LN, Durand DB, Stretch RH, Knudson KH. Prevalence and timing of sexual assaults in a sample of male and female U.S. Army soldiers. *Mil Med*. 1998;163(4):213–216.
5. Murdoch M, Polusny MA, Hodges J, O'Brien N. Prevalence of in-service and post-service sexual assault among combat and noncombat veterans applying for Department of Veterans Affairs post-traumatic stress disorder disability benefits. *Mil Med*. 2004;169(5):392–395.
6. Kakhnovets R, Holohan DR. Addressing military sexual trauma: Initial steps in treating the male patient. *Fed Pract*. 2007;24(7):16, 19–20, 23–24, 29.
7. Kutter CJ, Wolf EJ, Niles BL. How reminders of prior combat affect PTSD symptoms. *Fed Pract*. 2005;22(5):14–16, 20.
8. Grant DH. Managing posttraumatic stress disorder: A present-centered approach. *Fed Pract*. 2005;22(3):39–42, 45–46.