

PTSD Common in Patients With Intraoperative Awareness

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NEW ORLEANS — Events during surgery, especially intraoperative awareness, can lead to post-traumatic stress disorder (PTSD), investigators report.

Healthcare-associated PTSD can also be triggered by a stay in the intensive care unit (ICU), the use of mechanical ventilation, and cardiac arrest, said Elizabeth Whitlock MD, from the University of California, San Francisco.

However, "other than awareness, risk factors for symptoms of PTSD after surgery are poorly defined, and practical screening methods have not been applied to a broad population of surgical patients," she explained.

In their study, Dr Whitlock and her colleagues "confirmed the high rate of postoperative PTSD in awareness patients, but also identified a surprisingly high rate in matched nonawareness controls," she explained.

She presented results from the study, conducted while she was a student at Washington University in St. Louis, during the Best Clinical Abstract session here at Anesthesiology 2014.

Data for this study came from the Psychological Sequelae of Surgery study, which was a prospective cohort study of patients in the United States and Canada enrolled in one of three trials for the prevention of intraoperative awareness: B-Unaware, BAG-RECALL, or MACS.

Patients completed the PTSD Checklist-Specific, which involves a Likert scale and defines the surgery, or a modified Mini International Neuropsychiatric Interview by telephone to identify symptoms of PTSD.

The investigators used structural-equation modeling to produce a composite PTSD score and to examine potential risk factors.

Healthcare Trauma

The cohort was 56% male, and median time since surgery was 2 years. Cardiothoracic surgery was performed on 34% of the patients and general surgery on 20%; for the remaining patients, surgery type was divided between gynecologic, orthopedic, urologic, and other.

The 49 patients who experienced awareness were matched for age, sex, surgery type, and awareness risk with 254 patients who did not.

Of the 219 patients who completed the PTSD checklist, 44 (20.1%) exceeded the civilian screening cutoff score of 30 for PTSD symptoms resulting from their surgery. Of these, 15 of 35 patients experienced intraoperative awareness and 29 of 184 did not (42.9% vs 15.8%).

In addition, 19 patients (8.7%) both exceeded the cutoff and "endorsed a breadth of symptoms consistent with the DSM-IV diagnosis of PTSD attributed to their surgery," Dr Whitlock reported. Five of these patients experienced awareness and 14 did not (14.2% vs 7.6%).

A number of factors were found to be independently associated with PTSD symptoms.

Table. Factors Independently Associated With PTSD Symptoms

Factor	<i>P Value</i>
Dissociation at time of surgery	<.001
Perceived threat to life at time of surgery	.002
Previous PTSD	.003
Poor perceived social support	.006
Intraoperative awareness	.014
Previous mental health treatment	.017

Age, sex, ICU admission, and cardiac surgery were not significantly associated with PTSD symptoms.

"Screening surgical patients, especially those with potentially mediating risk factors (like intraoperative awareness or perioperative dissociation) for PTSD symptoms, with the checklist is practical and could promote early referral, evaluation, intervention, and possibly prevention of PTSD," Dr Whitlock explained.

"We need to develop a degree of clinical utility with this information," she acknowledged. She said that the only other surgical population that has been studied is patients undergoing lumbar fusion; in that group, patients who developed PTSD "tended to do worse on a number of clinical metrics."

"This is an interesting study from a great group of participating institutions," including Washington University, University of Michigan, and the University of Manitoba, said session comoderator Jerrold Levy, MD, from Duke University in Durham, North Carolina. "The 'n' is relatively small, which is encouraging," he added.

Dr Levy observed that only about 30% of the patients had undergone cardiac surgery, "which is always implicated" in greater risk.

In fact, cardiac patients "trended" toward lower risk for PTSD, Dr Whitlock reported. She attributed this to preparedness and expectations. "They knew they would have chest pain, they knew they would go to the ICU," she noted. "As has been shown with pain, if you are not expected to have much pain and then you have pain, the reported symptoms are more severe."

Session comoderator Michael Avram, PhD, from the Northwestern University Feinberg School of Medicine in Chicago, who is executive editor of Anesthesiology said that, "fortunately, it's a small number of patients who develop PTSD, but it can be devastating to those who do. Maybe we can do something as simple as warning patients what to expect."

Dr Whitlock, Dr Levy, and Dr Avram have disclosed no relevant financial relationships.

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