In the mood

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In the last 20 years of cardiac surgery, growing attention has been addressed toward neurologic functional outcomes, including long-term cognitive function and mood disorders.¹⁻⁴ Plenty of studies have shown that type II neurologic dysfunctions have detrimental effects on patients, affecting their quality of life.³ Specifically, postoperative delirium, defined as the onset of an acute confusional state, associated with a fluctuating course and characterized by inattention, impaired consciousness, and disordered cognition,⁵ has been associated with multiple negative outcomes in terms of mortality, morbidity, cognitive decline, and long-term reduction in quality of life.⁶⁻⁸

In this issue of the *Journal*, Nguyen and colleagues⁹ report a prospective study conducted on a cohort of cardiac surgical patients with the aim of identifying predictors of postoperative delirium and analyzing its effect on medium-term cognitive function and mood disorders. Nguyen and colleagues⁹ evaluated the patients preoperatively with validated clinical questionnaires to detect baseline cognitive and mood conditions then performed a telephonic interview at 6 to 9 months to assess differences among delirious and nondelirious patients in the domains of cognition, mood, and unhealthy use of alcohol. They found an association between postoperative delirium and an increased self-reported anxiety and depression at 6 to 9 months, whereas no differences in cognitive function were observed between the groups. Although risk factors of delirium have been consistently reported in previous reports, this study raises many interesting questions. First, in contrast with previous reports, there was no increased incidence of cognitive dysfunction in delirious patients.^{1,10} The telephonic follow-up, even if it was based on validated diagnostic tools, may have affected the results, making it difficult to compare them directly with previous findings. Second, the increased anxiety and depression reported by Nguyen and colleagues⁹ should be carefully considered. These symptoms are commonly reported in survivors from critical illness and have well-established detrimental effects on personal autonomy and quality of life^{11,12};

"In the Mood" (by Joe Garland).

Central Message

Delirium is still an orphan when it comes to specific treatment protocols.

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however, they are often neglected in the definition of negative outcomes. Only in recent years delirium has received proper attention, evolving from an obscure entity to a precise clinical condition associated with strong negative outcomes, such as prolonged mechanical ventilation, prolonged intensive care unit and hospital stay, and increased mortality.

Today, the diagnosis is made possible through validated diagnostic instruments, and the use of time-saving diagnostic tests allows us to identify patients at high risk for postoperative delirium.¹³ It is still unknown, however, when and how to treat delirious patients. Our preventive and therapeutic weapons against delirium in critically ill patients have not still completely found their focus. This is particularly true in the intensive care unit setting, where integrated approaches with a demonstrated efficacy in nonacute settings are hardly applicable. The horizon of prevention and treatment, however, is widening. Recent studies on cardiac surgical patients have linked the depth of anesthesia (the time spent in electroencephalographic suppression burst) with the development of delirium, with consequent negative outcomes.^{14,15} That finding reinforces the concept that neuromonitoring during cardiac surgery, including the measure of the depth of anesthesia with electroencephalographic processing systems and functional assessment with near-infrared spectroscopy,¹⁶⁻¹⁹ is an essential requirement in cardiac surgery.

Finally, delirium is still orphan when it comes to specific treatment protocols. Large randomized, controlled trials are warranted to reinforce the evidence about the efficacy of an integrated approach²⁰ starting at the time of patient admission, including preoperative risk assessment, anesthetic and

postoperative sedation carefully titrated and goal directed, intraoperative neurologic monitoring and the use of drugs with suggested protective effects.²¹

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