preventative program in reducing the burden of delirium after cardiac surgery. In an age of rapid technological innovations, it is important that we do not overlook the simple measures that may make the biggest difference to patient care and the cost-effectiveness!

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Commentary: Teamwork is dreamwork

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Delirium (defined as acute brain dysfunction, characterized by a transient, fluctuating course of inattention, impaired consciousness, and disordered cognition) constitutes the most common complication following cardiac surgery.¹ Previous studies found that postoperative delirium is associated with adverse outcomes, including death, cognitive decline, and loss of functional independence in the early postoperative period as well as long-term cognitive decline and increased mortality.²⁻⁵ The reported incidence of delirium ranges from 8% to 50% postcardiac surgery; however, the diagnosis remains challenging.¹ Despite this high incidence, treatment strategies remain incompletely

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CENTRAL MESSAGE

Delirium is a common complication after cardiac surgery. A focused, multidisciplinary postoperative approach may decrease the incidence of delirium and improve postoperative outcomes.

defined. In the current issue of the *Journal*, Enomoto and colleagues⁶ describe a single-institution, retrospective study following implementation of the Delirium Team Approach (DELTA) Program in 302 patients who underwent cardiovascular surgery. The DELTA program, described by Ogawa and colleagues in patients with malignancy, comprises a multidisciplinary, patient-centric program that lowers the incidence of delirium.

The DELTA program includes delirium education for physicians, nurses, therapists, and pharmacists; risk factor screening and delirium assessment; order modification

toward evidence-based medications used for sleep enhancement (reduced benzodiazepines); and treatment. Early mobilization of the patients and proactive family involvement in the postoperative care process are also core components of the program.⁷

This study analyzed patients undergoing surgery from 2018 to 2020 divided into groups before and after the introduction of the DELTA Program (137 pre-DELTA; 118 post-DELTA). Patients undergoing cardiac surgery (with and without cardiopulmonary bypass), vascular surgery, and thoracic surgery were included. Delirium was diagnosed retrospectively by a standardized chart review and the analysis included propensity score matching between the groups. Delirium occurred in nearly one half (46%) of the entire study population. Importantly, in patients who had postoperative stroke, almost all (9/10 patients) developed delirium as part of their clinical presentation.

The major finding of the study was a significant decrease in delirium following implementation of the DELTA Program, from 53% to 37% of the patients. Multivariable logistic regression found that the DELTA program resulted in a significant reduction in postoperative delirium (odds ratio, 0.38), and propensity score matching between the groups confirmed that the incidence of delirium was significantly lower in the post-DELTA program group. In addition, intensive care unit and total hospital stay was reduced, hospital costs were significantly lower, and self-removal of medical devices (nasogastric, chest tubes, etc) was reduced in the post-DELTA group. However, this study has limitations as a retrospective analysis of a small sampling from a single institution.

Despite these limitations, the message remains important. Regardless of the improvement in overall mortality in the current era of cardiac surgery, the physiologic stress of an operation remains high and cannot be mitigated by meticulous operative technique alone. This study demonstrates that committed, multidisciplinary perioperative teams and focused Enhanced Recovery After Surgery leads to significant improvement in patient outcomes. These improvements are evident, not only in the immediate postoperative period, but over the entire hospital course and in the long term as well.^{8,9} The importance of these approaches cannot be overstated. Teamwork is indeed dreamwork.

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