

Dissemination of nursing knowledge – Publications

Anna T Bickert, Cindy Gallagher, Amy Reiner, Walter J Hager, Mark M Stecker. (2008)

Nursing neurologic assessments after cardiac operations. *Annals of Thoracic Surgery*, 85(2):554-560.

Background. Although the neurologic status of patients undergoing cardiac operations has been well studied at other times, there are few studies of neurologic status in the immediate postoperative state. This study used standardized nursing neurologic evaluations to describe the sequence of neurologic changes during the first few hours after cardiac operations and the factors that influence them.

Methods. In this prospective study, patients arriving in the intensive care unit after cardiac operations were serially assessed using the Neurologic Intensive Care Evaluation (NICE) for up to 24 hours postoperatively. The study evaluated the effects on outcome of various preoperative and intraoperative variables, as well as the NICE scores.

Results. Recovery of brainstem reflexes occurred at 1.4 ± 1.4 hours, and the fully alert state occurred at a mean of 5.1 ± 3.8 hours after admission to the intensive care unit in patients without a new neurologic deficit. Patients with new neurologic deficits or patients discharged to supervised care settings took longer to reach each neurologic milestone. Older patients, patients with more complex surgical procedures, and patients with higher cardiovascular risk factors took longer to become fully alert. The time to reach the highest NICE score was a strong predictor of the duration of intubation but only weakly predicted other outcome variables in a multivariable analysis.

Conclusions. Standardized, serial nursing neurologic assessments of postoperative cardiac patients provide insight into the immediate postoperative period and may be a useful tool for early identification of patients at risk for adverse outcomes.