

Saving the Best for Last: Identifying and Intervening in Local Anesthetic Toxicity Emergency

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Background Information: Local anesthetic systemic toxicity (LAST) is a rare, but serious complication to local anesthesia that can be potentially fatal. Prompt recognition and intervention is critical for the best patient outcome, however, there is a lack of ability to recognize the signs and symptoms of LAST, along with a lack of knowledge of interventions in the post anesthesia care unit (PACU).

Objectives of Project: Clinical nurses will be able to: identify the procedure and clinical guidelines for LAST management, recognize 3 signs of LAST, locate supplies used during a LAST event, and calculate the dosage of intra-lipid emulsion (ILE) therapy for the reversal of LAST.

Process of Implementation: Institutional guidelines are consistent with the American Society of Regional Anesthesia and Pain Medicine's (ASRA) algorithm for the treatment of LAST. A pre-education survey was distributed to 25 RNs to identify educational barriers. An educational in-service was implemented to all RNs to identify signs/symptoms of LAST, teach interventions, and explain where to locate LAST emergency kit. A post-education survey was then distributed to see if their knowledge had improved. Pre-implementation, 36% of PACU RNs had the knowledge to care for patient during LAST, 24% knew procedure and clinical guidelines, 40% were able to identify 3 symptoms, 48% were able to locate LAST emergency kit, 16% knew how to calculate/verify dose of lipids, and 96% thought that education would improve their understanding. Post-implementation, 94% of PACU RNs had the knowledge to care for patient during LAST, 97% knew procedure and clinical guidelines, 94% were able to identify 3 symptoms, 94% were able to locate LAST emergency kit, 84% knew how to calculate/verify dose of lipids, and 100% thought that education provided improved their understanding.

Statement of Successful Practice: The pre-education survey established that there was an admitted lack of knowledge by nursing staff on LAST emergencies. After education, there was a significant increase of knowledge in nursing practice and interventions.

Implications for Advancing the Practice of Peri-Anesthesia Nursing: Management of LAST complications is imperative for safe and efficient PACU nursing care. Annual competency assessment and mock drills will be implemented to keep up skills. The LAST competency is also being added into the orientation pathway for new hires.