Decreasing Emergence Delirium through the Implementation of Dexmedetomidine with Pediatric Post-Surgical Patients

Kayla Witthoeft, BSN, RN, ONC, CPAN, Oconee Memorial Hospital, Seneca, South Carolina

Background Information

Emergence delirium (ED) is a dissociative state of consciousness with non-purposeful agitation and incoherence during emergence from anesthesia. ED can happen to anyone, but children are at highest risk. Studies show that 30-50% of children less than 10 years old will experience ED. Children experiencing ED will typically present with crying, thrashing, agitation, incoherence, and lack of eye contact.

ED lasts an average of 14 minutes. ED can result in damage to the surgical site, loss of IV, increased use of narcotics, increased staffing demands, and harm to the patient, staff, or parents. Patients that experience ED may show prolonged behavior during emergence from anesthesia. Studies show that 30% of children less than 10 years old will experience ED.

Objectives of the Project

The purpose of this evidence-based practice project was to decrease emergence delirium in pediatric patients aged 1-7 years through the administration of intravenous (IV) dexmedetomidine.

Process of Implementation

An American Society of PeriAnesthesia Nurses (ASPAN) member collaborated with the anesthesia providers to review the literature and discuss a new process change of administering dexmedetomidine to pediatric patients prior to emergence.

Nursing staff were provided education in the following ways:

- Journal clubs – Staff reviewed evidenced based practices on the use of Dexmedetomidine for pediatric ED
- Screening criteria – Anesthesia providers explained which patients would be the best candidates to receive dexmedetomidine and which patients would be excluded (age <1 year, bradycardia, reduced cardiac output)

Postanesthesia Care Unit (PACU) nurses were given badge buddies with the PAED scale and reviewed how to use it to ensure consistency in documentation.

- Preoperative nurses were given badges buddies with a list of ED risk factors and contraindications to help anesthesia providers screen for patients that could receive dexmedetomidine

Process of Implementation (cont.)

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Statement of Successful Practice

Six weeks after the implementation of this process change, PAED scores were collected again for comparison.

PAED scores were reanalyzed on 23 patients and it was found that the patients who received dexmedetomidine had an average PAED score of 5.9.

This process change has been implemented into the standard of care for pediatric surgical patients.

Imaginations for Advancing the Practice of PeriAnesthesia Nursing

The literature supports that reducing ED can decrease the risk of injury to patient and staff, lessen parental anxiety, decrease post-operative nausea, reduce narcotic use, and prevent postoperative maladaptive behaviors.

By collaborating with inter-professional partners and successfully implementing this evidence-based practice, ED was decreased, and patient outcomes were improved.

A review of the literature showed that dexmedetomidine (Precede) for pediatric surgeries can significantly reduce the rates of ED, as well as decrease the use of analgesics by up to 71%, reduce postoperative nausea, and decrease shivering.

References


