Providing Education to Reduce Corneal Abrasions in Patients Undergoing Spine Surgery

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Introduction: Corneal abrasions (CA's) are considered the most common corneal complication that occurs in patients in the perioperative period, for non-ocular surgeries undergoing general anesthesia. Perioperative corneal abrasions can cause several unpleasant sequelae including pain, ocular infection, and vision loss. Studies argue that spine patients are at an increased risk due to decreased awareness of contact with patient's face specifically the eyes. It is crucial that nurses providing care for these patients throughout perioperative phase are provided with training of perioperative risk factors, safe surgical positioning, and postoperative threats that could increase corneal abrasions.

Identification of the problem: Currently, there is no formal training on the risks or the system in place to track and document the occurrence of corneal abrasions that is provided to perioperative nurses at Beth Israel Deaconess Hospital. While clinicians understand that CAs are a potential complication for any patient undergoing general anesthesia, patients undergoing spine surgery in the prone position are at increased risk.

EBP Question: Does the implementation of perioperative education regarding the prevention, treatment and proper documentation of the incidence of corneal abrasion lead to a decrease in the occurrence of CAs in adult patients receiving general anesthesia for spinal surgery in the prone position.

Methods/Evidence: A baseline incidence rate of corneal abrasions was established, and a best practice was implemented to standardize CA prevention, diagnosis, and treatment throughout the perioperative period. A PowerPoint presentation was given to the staff to educate them regarding prevention and documentation of CAs to determine if modifications and additional improvement may be needed. A 3-month timeline was set.

Significance of Findings: Following this change in practice, a notable decrease in the incidence of perioperative CAs occurred from 3 in 202 (1.49%) spinal patients during the months of July through September 2022 to 0 in 155 (0%) in the three months following perioperative staff education.

Implications for perianesthesia nurses and future research: Nurses are the most significant portion of the healthcare workforce and are critical to keeping patients safe from harm or injury. Perioperative education was associated with fewer complications associated with corneal abrasions.