

Opioid Analgesics Association with Serotonin Syndrome in Patients Taking Antidepressant Medications

Jennifer Huddlestun, BSN, RN, SRNA & Joselline Garcia, BSN, RN, SRNA

Scholarly Project Chair: Steve Fowler, DNP, CRNA, Project Mentor: Jose Hurtado, MSNA, CRNA, Project Reviewer: Lynn Rowe, PhD, RN
AdventHealth Doctor of Nurse Anesthesia Practice

Problem

- Serotonin syndrome (SS) is an under-diagnosed and potentially life-threatening condition.
- There is an increased risk of SS when opioids are used in patients taking serotonergic medications.
- A continuing education (CE) approved for CE credits have not been developed in the past by AdventHealth University (AHU) Student Registered Nurse Anesthetists (SRNAs). The developed module could potentially fill the gap in knowledge on opioid analgesics association with SS in patient's already taking serotonergic drugs.

Methods

- Project Design-
 - Feasibility study
- Setting-
 - Echelon
 - AdventHealth University (AHU)
- Innovation-
 - At AHU what is the feasibility of a Student Registered Nurse Anesthetist (SRNA) developed one-hour online module regarding opioid analgesics association with SS being approved for continuing education (CE) credit by the American Association of Nurse Anesthetists (AANA)?

Discussion & Implications

- The development of a one-hour CE module by AHU SRNAs on opioid analgesics association with SS in patients already taking antidepressant medication being approved for CE credit by the AANA is feasible.
- The content provided in the educational module holds value and will benefit those who complete the online program by increasing their knowledge and skills.
- The feasibility study itself will benefit Echelon, AHU, and future SRNAs wanting to develop an online educational module; which could potentially generate revenue and recognition for the institution.

Conclusions

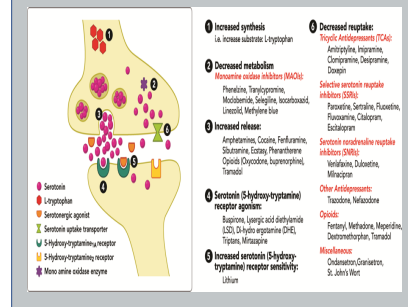
- An online education module on opioid analgesics association with SS, specifically in patients taking antidepressant agents, could increase the knowledge base and skills of anesthesia providers to effectively recognize and manage SS.
- The online module completed by SRNAs received approval for one CE credit from:
 - AANA
 - Florida Board of Nursing
 - American Nursing Credentialing Center
 - California Board of Registered Nursing

Literature Review

- A review of recent literature identified an association between opioid analgesics and SS when patients were already taking pro-serotonergic antidepressant medications.
- Opioids including tramadol, fentanyl, methadone, and meperidine were commonly mentioned as being associated with SS, usually when combined with a selective serotonin reuptake inhibitor (SSRI).

(Abadie et al., 2015; Adler et al., 2015; Beakley et al., 2015; Raatog, Swann, & Patel, 2011; Rickli, Linkoni, Hooser, & Licchi (2018); Simachey, Pollard, Nookala, & Olatoye, 2018; Warner et al., 2017; Wernicke, Jamshidi, Taylor, & Ott, 2016).

Illustration



Recommendations

- Formal training for SRNAs in writing/developing online educational module, creating test questions and objectives.
- Meeting checkpoints along project timeline to hold parties accountable (students, professors, Echelon).

Acknowledgements

- Special acknowledgement to Steve Fowler, DNAP, CRNA for the leadership and direction of this scholarly project.
- Lori Polizzi & Echelon staff for assistance with the development of the online module.
- *References available upon request.*



