Evaluation of Dexmedetomidine Use in an Adult Intensive Care Unit (ICU)

Kelly Tocki, PharmD | W. Paul Moore, PharmD, BCPS, BCCCP | HCA Healthcare

TriStar Summit MEDICAL CENTER

Background

- The 2018 Pain, Agitation, Delirium, Immobility and Sleep Disruption (PADIS) guidelines recommend non-benzodiazepine agents over benzodiazepines for sedation
- Dexmedetomidine is a selective, alpha-2 agonist that carries sedative and anesthetics properties and allows for targeting a lighter sedation without significant respiratory effects
- Dexmedetomidine is approved in the setting of sedation induction and maintenance in mechanically ventilated patients, as well as for sedation of non-intubated patients prior to and/or during procedures

Purpose

- To assess the appropriateness of dexmedetomidine use in a community hospital, intensive care unit setting

Setting

- TriStar Summit Medical Center Intensive Care Units, a 12-bed medical ICU and a 12-bed surgical ICU

Methods

- Retrospective chart review of all patients who received dexmedetomidine between June 2019 – December 2019
- Data collected using electronic health record: age, weight, dexmedetomidine indication and duration of use, mechanical ventilation, duration of ventilation, and concomitant sedative medications

Methods cont.

Inclusion

- Patients with an order for dexmedetomidine and a documented administration

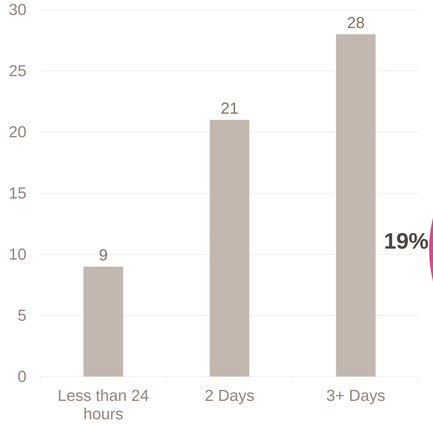
Exclusion

- Patients with an order for dexmedetomidine but no documented administration

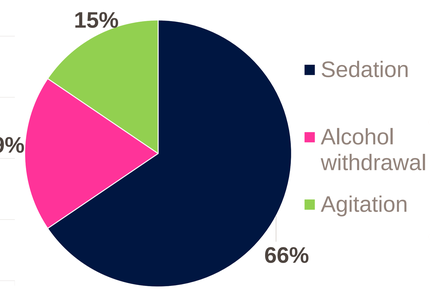
Results

Baseline Characteristics (n=58)	
Age, years	59.9
Weight, kg	88.4
Sex, male, (%)	60.3

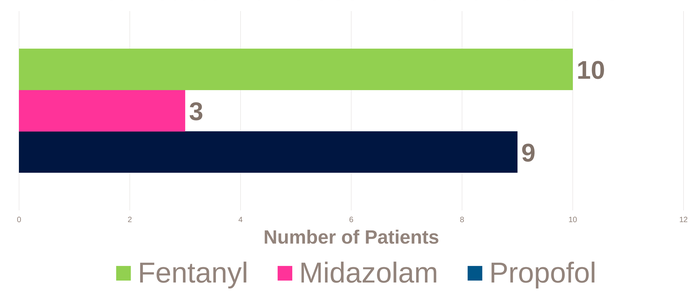
Average Duration of Dexmedetomidine Use



Dexmedetomidine Indication for Use



Dexmedetomidine Use with Other Sedatives



Results cont.

- Concomitant sedatives were used in 16 total patients (28%)
- 69% of patients required some duration of mechanical ventilation
- Mechanical ventilation averaged four days in patients receiving only dexmedetomidine and 5 days in patients with receiving a duplicate sedative

Conclusion

- The majority (72%) of dexmedetomidine was used without additional sedatives
- In the population evaluated, 66% of patients received dexmedetomidine for its FDA approved indication and 15.5% of patients received the recommended duration
- Need for continued focus on assessing the appropriateness of duplicate sedatives
- Future implications: create a protocol specific to dexmedetomidine use as we continue to see more use for alcohol withdrawal

Disclosure

The authors have no potential conflicts of interest to disclose

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* References available upon request