Emergence Delirium
PTSD
Simulation

Recommendations for practice

PeriAnesthesia Nursing Together: Importance of Connection, Power of Community

1

PeriAnesthesia Nursing Together: Importance of Connection, Power of Community

How simulation exercises bring connection and power in the perianesthesia community

2

Emergence Delirium & PTSD: Simulation

- **Perianesthesia/Perioperative care is multi-disciplinary**
  - Surgeons/Scrub personnel
  - Circulating registered nurses
  - Anesthesia providers
  - Post Anesthesia nurses
  - Central sterilization

Information on best practice may not cross healthcare disciplines- Silos.

Disciplines have own professional standards/journals/conferences

(Mackenzie et al 2017)

3

Emergence Delirium & PTSD: Simulation

- **Interprofessional collaboration**
  - Linked to improve outcomes for patients
  - Improved morale among staff
  - Enhanced professional competence
  - Better understanding among health care workers
    - E.g. Code stroke
      - Cardiac arrests

4

Emergence Delirium & PTSD: Simulation

- **Inter-institutional collaboration**
  - Linked to development of core competencies
  - Strengthen unity of health care delivery – in hospital systems and across country
    - VA
    - Large hospital systems (e.g. Mayo)
    - Intrastate systems (e.g. UPMC)

(King et al, 2013)

5

Emergence Delirium & PTSD: Simulation

Emergence Delirium

An example of a situation each stage of perianesthesia can see, but the training has been "silo-ed" despite research and evidence developed in the past 10 years.

Need the synchronous, interprofessional training for this type of situation

Simulation training incorporating all disciplines breaks barriers

(Villemure et al 2018)

6

Emergence Delirium & PTSD: Simulation

- **Simulation training**
  - Designed by practicing perianesthesia providers and psych provider
  - Tools used: literature, personal experience, 2019 National Patient Safety Goals, Quality and Safety in Education (QSEN) competencies
  - Goal- create a realistic, hands-on collaborative experience for a challenging and unpredictable emergency situation
  - Requires- rapid, unified, and competent response

Lovestrand et al, 2021

7

Emergence Delirium & PTSD: Simulation

- **Simulation training**
  - **Pilot**
    - At an Army community hospital
    - Regional VA hospital in a major city
      - Day one review of literature by participants.
      - Pre and Post tests
      - Full cooperation of hospital leadership -organized day of training.
      - Use of standard NLN template for simulation exercises

Results: Overall, the comments on evaluation by the participants were positive and validated the efficacy of the training from all disciplines involved.

Lovestrand et al, 2021

8

Emergence Delirium & PTSD: Simulation

- **Simulation training**
  - **Pilot**
    - **Results:** Overall, the comments on evaluation by the participants were positive and validated the efficacy of the training from all disciplines involved.
    - **Comments:**
      - "Improved communication for all caregivers through the continuum of care"
      - "Learned follow-up a little deeper in patients with PTSD and then talk about it"
      - "Better understanding of emergence delirium and how to manage proper situations/outcomes with patient-centered safety"
      - "Improved understanding of medical management"

Lovestrand et al, 2021

9

Preoperative Assessment

Identify at-risk patients

- Medication reconciliation—note psychotropic
- medications especially prasozin
- Look for the triad of PTSD symptomatology *avoidance, hyperarousal, and intrusion* symptoms such as nightmares
- Develop hospital-specific process

Development of trusting relationship

- Assure patient of his/her safety throughout process
- Include family and/or battle buddy
- Consistency of staff, especially in PACU
- Vocal/local technique intraoperatively

10

Intraoperative and PACU Phase

Pharmacology

- Perioperative Management of Emergence Delirium
- Monitor heart rate arrhythmias, and blood pressure
- if alpha adrenergic medication given
- Rescue medications i.e. Dexmedetomidine,
- Clonidine, Ketamine, Promethazine, Droperidol

Psychological/emotional

- Quiet environment, soft voices, face patient
- Tactile stimuli only on lower extremities
- Anxiety reducing efforts
- Active listening/validate experiences/symptom relief
- Documentation- consider use of Wounded Warrior Tool

11

Discharge

Discharge considerations

- Meet normal hospital criteria for PACU discharge
- Referrals for follow-up to behavioral health
- Include family or other social support system
- Letter from anesthesia with plan that demonstrated good outcomes for future surgery visits.

12

Specific Tools- all disciplines

- Wounded Warrior Tool- JoPAN, 2018
- Cognitive Behavioral Therapy
- Medication Reconciliation.

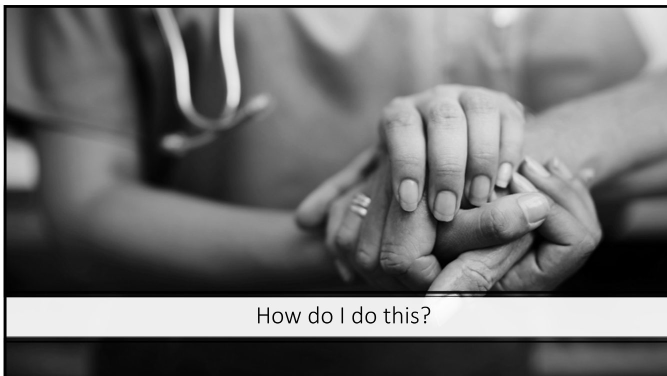
13

Simulation Best Practices

- High skill, low frequency skill practice
- Frame the "why"
- Choose your Learning Theory based on audience
- When creating scenario focus on learning objectives
- Use relevant case study
- Debrief

(Levine et al., 2014)

14



15

Pre-op

- Meet Joe, he's 31-year-old veteran, Here's here for a right inguinal hernia repair under general anesthesia.
- As you prepare Joe for surgery you notice Joe is anxious, he asks you to repeat several questions, and snaps at you towards the end of the interview
- What would an appropriate response to Joe's behavior?
  - "you seem on edge" or "you seem anxious"
- How would you adjust your care at this time?

16

Pre-op

- You notice the pt is fidgeting and avoid eye contact during the anesthesia assessment
- What can you do to help reduce Joe's discomfort?

17

Pre-op

- Joe shares that he is concerned that superiors will find about his PTSD
- What is an appropriate response?
- Joes shares that he is concerned he may wake up "swinging or punching"

18

Pre-op

- This is a great time to establish trust with the patient
- "During the procedure I will be talking to you and reminding you of your safety even though you are asleep".
- Assure the patient and family members that the perioperative team understands the complexities of the veteran population.
- Any previous treatment for his PTSD?
- What is the safest way to help you wake you up?

19

Anesthetic plan discussion

- TIVA using dexmedetomidine/clonidine
- Adequate pain management
- Adequate oxygenation and ventilation
- Vocal coaching during induction and emergence
- Identify co-morbidities; Assesses labs for fluid and electrolyte imbalances (Greiner & Kremer, 2019)(Lovestrand et al., 2017)
- **NO benzodiazepines**

20

Intraoperative

- TEAM Huddle
  - During briefing CRNA/OR nurse states:
  - Pt has a history of PTSD, "waking up crazy", hitting his wife in his sleep, nightmares, and he seems extremely nervous in holding
- What can we do, as a team, to provide the least stimulating environment upon arrival to OR, and during induction and emergence?
- Surgeon stay in room to provide extra support/familiar face upon awakening.

21

PACU

- Prior to arriving what are strategies that can be initiated to help minimize the incidence of Emergence delirium?
- The PACU RN receives report
  - What are the critical elements to ensure safe efficient hand-off?

22

PACU

- Anesthesia report
  - Joe 31-year-old pt a right inguinal hernia repair under general anesthesia, past medical history Significant for asthma and PTSD
  - Pt awoke aggressive, angry, and swinging at staff, clonidine 50 mcg given
  - Joe is currently sleepy and only awake when stimulated

23

PACU

- Upon awaking Joe is tearful, disoriented, trying to remove all equipment, repeating "we need to get out of here"
- What are the key actions to support the patient?
- After a period of the patient being very distressed anesthesia comes to the bed side
- What are the key actions to support the patient?

24

PACU

- Anesthesia gives a small dose of propofol, pt settles down, and wakes up calmer, but sad and anxious
- What are the key actions to support the patient?
- What did you feel? What did you see?

25

Discharge Planning

- Has Joe been treated in the past?
- Does Joe need a referral?
- Does Joe need help accessing resources?
- Include family in discharge teaching
- DOCUMENT event

26

Pocket Guide Handout

Table 1. Nursing Considerations/Management of Emergence Delirium

Preoperative Assessment	
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	such as nightmares
	Develop hospital-specific process
Development of trusting	Assure patient of his/her safety throughout process
relationship	Include family and/or battle buddy
	Consistency of staff, especially in PACU
	Vocal/local technique intraoperatively

Table 2. Nursing Considerations/Management of Emergence Delirium

PACU	
Pharmacology	Perioperative Management of Emergence Delirium
	Monitor heart rate arrhythmias, and blood pressure
	if alpha adrenergic medication given
	Rescue medications i.e. Dexmedetomadine,
	Clonidine, Ketamine, Promethazie, Droperidol
Psychological/emotional	Quiet environment, soft voices, face patient
	Tactile stimuli only on lower extremities
	Anxiety reducing efforts
	Active listening/validate experiences/symptom relief
	Documentation—consider use of PAED scale
Discharge considerations	Meet normal hospital criteria for PACU discharge
	Referrals for follow-up to behavioral health
	Include family or other social support system

27

Questions?

28

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29

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30