How to keep calm while calming others: approach to the agitated patient

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Disclosure

I have no relevant relationships with ineligible companies to disclose within the past 24 months. (Note: Ineligible companies are defined as those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.)

Objectives

At the conclusion of this session participants should be able to:

1. Develop a framework with which to approach acute agitation
2. Discuss common causes of agitation in the acute care setting
3. Discuss behavioral approaches to de-escalation
4. Discuss pharmacological approaches to management of agitation

You will practice psychiatry…

…whether you want to or not

What is agitation?

- Project BETA Consensus Guidelines:
  1. Abnormal and excessive verbal behavior such as shouting, cursing, threatening, or screaming
  2. Abnormal and excessive physically aggressive behavior such as pushing, shoving, actively resisting care, repeatedly attempting to elope, or excessive threatening gestures
  3. Heightened arousal
  4. Symptoms cause clinically significant disruption of patient's functioning
  5. Abnormal excessive or purposeless motor behavior
- Motor activity is usually repetitive, non-goal directed
- Evidence of repetitive thoughts based on vocalizations
- May be more sensitive to stimuli
- May be caused by a life-threatening condition
- Implies a medical/psychiatric emergency, evaluation should be in person
- **Treatment is not a one size fits all approach!!!**

Roppolo 2020, Project BETA 2012

Levels of Agitation

- Agitation occurs on a continuum. Anxiety → agitation → aggression
- Mild – Overt physical and/or verbal overactivity, but redirecable. Usually responds to verbal de-escalation only, offer PO meds as appropriate.
- Moderate – Physically or verbally threatening, extreme activity, but not overtly violent, difficult to redirect. Try de-escalation. Most can respond to PO meds without needs for IV/IM meds or restraints
- Severe – Currently violent or aggressive, attacks objects or people. Not engaging in conversation. Attempt de-escalation, low threshold for IM/IV meds, restraints.
- Consider use of scale like Behavioral Activity Rating Scale (BARSS) to monitor effects of interventions

Roppolo 2020

Safety in the hospital

- Violence is correlated with patient facing time, nursing staff therefore experience most assaults (Lehmann 1999, Gerberich 2004)
- 46% of nurses reported some type of workplace violence during their five most recent shifts; of these nurses, one third were physically assaulted (Duncan 2000)
- Healthcare workers who had experienced threats of violence were 7x more likely to experience physical violence (Lanza 2006)
- The characteristic that is most common among perpetrators of workplace violence is altered mental status associated with dementia, delirium, substance intoxication, or decompensated mental illness (project BETA 2012)
- Violence and threats should NOT be considered just a part of the job. It is our duty as providers to keep both patients and staff safe

Our case

Mr. Brown is a 57-year-old man with history of PTSD, severe alcohol use disorder, T2DM, and HTN admitted two days ago for treatment of acute pancreatitis.

You are on crosscover and receive a call from the patient's primary nurse to tell you that the patient is becoming increasingly agitated and they don't have any PRN medications for agitation. The nurse asks for medication orders at this time.

How do you proceed?

Framework for agitation

- Talk to the staff caring for the patient – in person is best
  - What do they mean by “agitated?”
- Briefly review the chart (especially on X-cover)
  - Diagnoses, labs, medications (scheduled and PRN, home meds), notes from primary team and specialists, search for key words
- See the patient IN PERSON. By this point you should already be working through your differential and you know whether agitation is mild, moderate, or severe
- Confirm or build on differential through appropriate (**and safe**) exam
- Start verbal de-escalation tactics as soon as the patient can see or hear you
- If pharmacological strategies are needed, choose based on leading diagnosis and medical/psychiatric co-morbidities
- Consider other interventions such as restraints, 1:1, removing objects from room, etc
- Ongoing evaluations to determine whether interventions are effective, differential needs to be adjusted, further medical work-up is indicated

You meet the patient's nurse in front of their room and open their chart. The nurse tells you the patient was calm and pleasant yesterday, but has presented as increasingly disoriented throughout the day today. He has been visualizing insects in his room and became fearful that his qHS medications were poisoned. You see that the patient's BAL on admit was 250 and most recent sodium was 127, potassium was 2.8. The patient has a history of alcohol withdrawal and has a diagnosis of PTSD related to traumas experienced in childhood and during a period of prolonged incarceration as an adult. He is strict NPO due to his pancreatitis and is not currently on an alcohol withdrawal protocol.

In person evaluation

- Begins as soon as you see the patient
  - Level of psychomotor agitation, state of room, eye contact, signs of psychosis
- Red flags for life threatening condition – vital signs, head trauma, focal neurological exam, diaphoresis, etc. – that need immediate attention.
- Cursory evaluation of acute safety risk
- When to consider a medical etiology of new psych symptoms: Abnormal presentation in patient with known psych history, >45 with no psych hx, focal neurological findings, immunocompromised state (Gottlieb 2018)

From outside of the room you see Mr. Brown is pacing in his room. He appears fearful and is talking to himself. He repeatedly looks up and yells at the television and swats at his skin. His most recent vitals included BP 194-115, HR 122, Temp 100.2, RR 21, O2 92%

You enter the room and Mr. Brown immediately begins yelling repeatedly “I have to leave, I’m not safe here!” He is diaphoretic with noticeable bilateral upper extremity tremor.

Acute life-threatening causes of agitation

CNS – head injury, CVA, seizure, hydrocephalus

Infection – Meningitis, encephalitis, syphilis, sepsis

Toxidrome – adverse drug reaction (serotonin syndrome, neuroleptic malignant syndrome, steroid-induced psychosis), withdrawal from benzos and alcohol

Respiratory – hypoxia, hypercarbia

Cardiovascular – shock, hypertensive urgency/PRES

Metabolic/endocrine – acidosis, hyper/hypoglycemia, electrolyte abnormalities, hyper/hypocortisolism, hepatic or renal dysfunction, nutritional deficiency (Wernicke's encephalopathy), thyroid dysfunction (thyroid storm, myxedema coma)

Adapted from Gottlieb 2018

Common causes of agitation

Substance-intoxication and withdrawal	Delirium	Neurocognitive	Psychiatric
• Alcohol, opioids, stimulants, cannabis, benzodiazepines • Can be due to iatrogenic causes!!	• Due to underlying medical causes, usually multifactorial	• Major neurocognitive disorders, acute and chronic TBI, intellectual and developmental disorders	• Psychotic disorders, mood disorders, PTSD, personality disorders

Verbal de-escalation approach

- Patients who are able to engage in any form of conversation should be candidates for verbal de-escalation
- Powerful tool – builds trust, mitigates violence
- Requires empathy, patience, sincerity
- Setting the scene
  - Offer space, food, drinks, lights on or off, door opened or slightly ajar (never closed)
  - Consider how many people need to be in the room
  - Oftentimes, security presence can escalate a patient
  - Respect personal space but ensure safety by positioning in the room
  - Soft voice, slow movements, eye contact

Richmond 2012

10 domains of verbal de-escalation

- Respect personal space
- Do not be provocative
- Establish verbal contact
- Be concise
- Identify wants and feelings
- Listen closely to what the patient is saying
- Agree or agree to disagree
- Lay down the law and set clear limits
- Offer choices and optimism
- Debrief the patient and staff

Project BETA 2012

Aggression is present?

Intentionally violent (verbally or physically)

Tends to be less due to altered mental status, more psychological

Can be classified with differing approaches to management depending on the type of aggression present

- Instrumental aggression
- Fear driven aggression
- Irritable aggression

Due to the patient's current level of agitation, we ask the nurse to call a behavioral code to ensure security staff are at standby but out of view. We keep the door ajar, sit on a stool near the door but not blocking the patient in the room. We ask the patient to sit down as well, which they do temporarily. We gently ask them about their experiences and how we can be helpful. The patient then jumps up and starts making threats that if we don't let them out now someone will end up "in a body bag." The patient does not respond to ongoing attempts at de-escalation.

Restraints

Why restraints should be a last resort intervention:

- Elevated risk of injury to staff and patient when we go hands on (Carmel 1989, Hick 1999, ACEP 2020)
- Can be experienced as coercion, aggression, cause psychological trauma, restraint utilization influenced by factors such as gender, race (Chieze 2019, Wong 2020)
- Associated with increased ED and psychiatric hospital lengths of stay (Knutzen 2011)
- Many patients have a history of physical and sexual trauma
- Going hands on may reinforce a patient's belief that violence is necessary to resolve conflict (project BETA 2012)
- Low restraint usage is now a key quality indicator by Joint Commission

If restraints are necessary

- Take out of restraints ASAP – can start with one limb at a time
- Consider 1:1 for faster release from restraints
- Chemical sedation may reduce negative consequences reported by individuals physical restrained (Wong 2020)
- Hard v soft restraints and monitoring requirements
- Know your hospital policy and state laws

Medications

- Consider underlying cause
  - Treatments for some etiologies may harm others
- When possible, the patient should be involved in deciding type of med and route of administration
- Consider psychiatric and medical co-morbidities, whether a patient has IV access, whether the patient is on a med-surg floor v ED v stepdown or ICU
- Use of meds should not be to sedate to unconsciousness, but to calm a patient to promote safety and ongoing assessment/treatment
- Most medications used to treat acute agitation are used off-label for this indication

Parenteral antipsychotics for acute agitation

- PO antipsychotics take at least an hour for onset, not effective for moderate to severe agitation
  - ODT formulations help with cheeking, but not faster onset. Much more expensive.
- 1st gen IM and IV formulations
  - Haloperidol – Onset 15-30 min. Highest EPS risk.
  - Droperidol – Onset 5-10 min. EPS and QTc risks. Shorter half-life. Often not available outside of ED.
  - Safe to administer with benzos (midazolam for quick agitation control v lorazepam for longer acting but longer onset)
- 2nd gen IM and IV formulations
  - Olanzapine – Onset 10-20 min. Duration 4-6 hrs. High risk of sedation and orthostasis, blackbox warning with parenteral benzos within 1hr, low risk for akathisia and EPS. Good antipsychotic.
  - Chlorpromazine – Onset 15-30 min. High risk of sedation and orthostasis. Low risk for akathisia and EPS.
  - Ziprasidone – Onset 15-30 min. significant QTc effect compared to other antipsychotics, less sedating, shorter half-life
  - Aripiprazole – not widely available (expensive), minimal QTc effect, less sedating, akathisia
  - Preferred over 1st gen for TBI, movement disorders, dementia populations (Kales 2012, Reus 2016, Aupperle 2012)
- Recent Evidence suggests AGAINST giving diphenhydramine prophylactically to prevent EPS (Jeffers 2022)
- Negative effect considerations of all antipsychotics:
  - Orthostatic effects (alpha-1 antagonism)
  - Sedation, particularly with IV formulations in patients with respiratory conditions or on opioids and/or benzos/phenobarb/alcohol
  - Lower seizure threshold
  - QTc (although way less of a concern than many of us think - Beach 2013)

Wilson 2012, Zun 2018, Taylor 2017, Williams 2018

Parenteral benzodiazepines for acute agitation

- Lorazepam – onset 20-30 min. Duration 4-6 hrs.
- Midazolam – onset 5 min for IV and 15 min for IM. Duration 2hrs.
  - Works well with IV or IM droperidol or olanzapine or haloperidol for rapid agitation control.
- Diazepam – onset 5-10 min. Duration 6-45 hrs, redistributed to peripheral fat stores so repeated dosing gets tricky (dose stacking)
- Caution in delirium, patients with fragile respiratory state, on opioids
- May cause paradoxical disinhibition and agitation in dementia, TBI, IDD cases

Ketamine

- IM formulation for agitation
- Onset of 3-7 min, duration 30 min
- Can cause emergence reaction (more agitated with psychotic symptoms)
- Sympathomimetic – risk for adrenergic crisis
- Can cause laryngeal spasm – increased risk for intubation
- Can worsen PTSD and psychotic symptoms

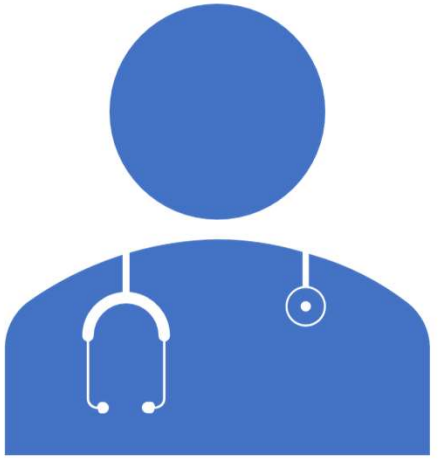
Riddell 2017, Sullivan 2020

Others

- Dexmedetomidine drip in ICU and step down, recent sublingual film ($$$). Clonidine patch or PO to transition from dexmedetomidine.
- IV Depakote for TBI, acute mania, encephalitis
- Guanfacine ER in IDD spectrum (Propper 2018, Singh 2019))
- Propranolol to treat akathisia, TBI agitation
- Low dose trazodone dosed TID for dementia agitation

MDM capacity and mental health law

- VERY important consideration when deciding appropriate next steps regarding discharge decisions, treating against someone's will
- Read about medical decision-making capacity, become familiar with this as all medical providers do this daily (even without realizing it!)
- Become familiar with mental health and proxy laws in your state



We decide that the patient is most likely experiencing alcohol withdrawal and order lorazepam IV to be given now. We are able to explain our concerns to the patient, and given that they have experienced relief from IV lorazepam in the past, they are agreeable to the medication. Within 30 minutes the patient's vital signs are improving and they are better able to engage in more thorough physical exam and assessment. We draw additional labs to rule out other contributors to delirium, order alcohol withdrawal protocol, and plan to return to evaluate the patient and their benzos requirements within 1-2 hours.

Take Home Points

- Agitation should be approached as a medical emergency
- Use a framework in your approach similar to other undifferentiated signs and symptoms (e.g. chest pain, altered mental status)
- Verbal de-escalation WORKS and leads to better outcomes for patients and staff
- The differential diagnosis is key to agitation management, particularly when choosing pharmacological interventions
- Provide consistent re-evaluation and updated plan until agitation resolves

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References

- American College of Emergency Physicians. Use of restraints. 2020
- Aupperle P. Management of aggression, agitation, and psychosis in dementia: focus on atypical antipsychotics. Am J Alzheimers Dis Other Demen 2006; 21(2): 101-108.
- Beach SR, Celano CM, Noseworthy PA, et al.: QTc prolongation, torsades de pointes, and psychotropic medications. Psychosomatics 2013; 54:1–13
- Roppolo et al. Improving the management of acutely agitated patients in the emergency department through implementation of Project BETA. JACEP Open 2020; 898-907.
- Carmel H, Hunter M. Staff injuries from inpatient violence. Hosp Community Psychiatry. 1989;40(1):41-46
- Chieze M, Hurst S, Kaiser S, et al.: Effects of seclusion and restraint in adult psychiatry: a systematic review. Front Psychiatry 2019; 10:491
- Duncan S, Estabrooks CA, Reimer M. Violence against nurses. Alta RN 2000;56:13-14
- Gottlieb M, Long B, Koyfman A. Approach to the agitated emergency department patient. J Emerg Med. 2018;54(4):447-457.
- Hick JL, Smith SW, Lynch MT. Metabolic acidosis in restraintassociated cardiac arrest: a case series. Acad Emerg Med. 1999;6(3):239-243.
- Jeffers T, Darling B, Edwards C, et al.: Efficacy of combination haloperidol, lorazepam, and diphenhydramine vs combination haloperidol and lorazepam in the treatment of acute agitation: a multicenter retrospective cohort study. J Emerg Med 2022; 62:516–523
- Kales HC, Kim HM, Zivin K, et al.: Risk of mortality among individual antipsychotics in patients with dementia. Am J Psychiatry 2012; 169:71–79
- Knutzen M, Mjosund NH, Eidhammer G, et al. Characteristics of psychiatric inpatients who experienced restraint and those who did not: a case-control study. Psychiatr Serv. 2011;62:492–497.
- Lanza ML, Zeiss RA, Rierdan J. Non-physical violence: a risk factor for physical violence in health care settings. AAOHN J. 2006;54(9):397- 402.

References

- Lehmann LS, McCormick RA, Kizer KW. A survey of assaultive behavior in Veterans Health Administration facilities. Psychiatr Serv 1999;50:384-389
- Phillips JP: Workplace violence against health care workers in the United States. N Engl J Med 2016; 374:1661–1669
- Propper L: Managing disruptive behaviour in autism-spectrum disorder with guanfacine. J Psychiatry Neurosci 2018; 43:359–360
- Reus VI, Fochtmann LJ, Eyler AE, et al.: The American Psychiatric Association practice guideline on the use of antipsychotics to treat agitation or psychosis in patients with dementia. Am J Psychiatry 2016; 173:543–546
- Richmond JS, Berlin JS, Fishkind AB, et al. Verbal De-escalation of the agitated patient: consensus statement of the American Association for Emergency Psychiatry Project BETA De-escalation workgroup. West J Emerg Med. 2012;13(1):17-25.
- Riddell J, Tran A, Bengiamin R, et al.: Ketamine as a first-line treatment for severely agitated emergency department patients. Am J Emerg Med 2017; 35:1000–1004
- Singh D, Wakimoto Y, Filangieri C, et al.: Guanfacine extended release for the reduction of aggression, attention-deficit/hyperactivity disorder symptoms, and self-injurious behavior in Prader-Willi syndrome—a retrospective cohort study. J Child Adolesc Psychopharmacol 2019; 29:313–317
- Sullivan N, Chen C, Siegel R, et al. Ketamine for emergency sedation of agitated patients: a systematic review and meta-analysis. Am J Emerg Med. 2020; 38(3): 655–661.
- Aupperle P. Management of aggression, agitation, and psychosis in dementia: focus on atypical antipsychotics. Am J Alzheimers Dis Other Demen 2006; 21(2): 101-108.
- Williams AM. Coadministration of intramuscular olanzapine and benzodiazepines in agitated patients with mental illness. Ment Health Clin. 2018; 8(5): 208-213.
- Wilson MP, Pepper D, Currier GW, Holloman GH Jr., Feifel D. The psychopharmacology of agitation: consensus statement of the American Association for Emergency Psychiatry Project Beta psychopharmacology workgroup. West J Emerg Med. 2012; 13(1): 26-34.
- Wong AH, Ray JM, Rosenberg A, et al. Experiences of individuals who were physically restrained in the emergency department. JAMA Netw Open. 2020;3(1):e1919381.