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Agitation Crisis Control

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ANNALS CASE

The often frustrating and occasionally dangerous challenge of acute agitation in the emergency department (ED) seems to be increasing in frequency and severity. Acutely agitated patients are not only experiencing distress themselves but also creating a threat to the safety of themselves, staff, and even their fellow patients; hence, the vital need for safe and prompt treatment. In this month's *Annals*, Miner et al¹ look at the prevalence of agitation at an urban ED. Spoiler alert: it is common! Decisions to restrain or sedate agitated patients can vary by provider and patient. Let's take a closer look at the options and what you might choose in some scenarios.

THE BASICS OF ACUTE AGITATION

Remember that serious medical problems can present with agitation. Hypoglycemia, hypoxia, delirium, intracranial injuries, and encephalitis are just a few dangerous entities that may present as agitation. Restraints and antipsychotics alone will not treat a dangerous underlying cause! Check a glucose level, check a pulse oximetry level, evaluate for neurologic deficits, and always consider potential dangerous underlying causes. Also, ask why the patient is agitated because the answer can sometimes be surprising and easily solved.

DE-ESCALATION

Whenever it can be done safely, soothing an agitated patient verbally will ultimately be better for the patient.

De-escalation, not immediate leather restraints and intramuscular injections, may calm the agitated patient while not putting him or her at risk for adverse medication reactions, rendering the patient unable to communicate or potentially damaging the patient-physician relationship. Some just want something to eat, to talk to a physician, or some other low-hanging fruit. If patients can be calmed by any other means, do that first! A turkey sandwich has been known on occasion to de-escalate a smoldering patient. Some agitated patients are still able to cooperate and may agree to take medication by mouth; if so, then do that! Unfortunately, patients may present well beyond this point. Oftentimes they ride the gurney into the ED, screaming profanity, thrashing, and soaking their spit sock while multiple staff members, security officers, or law enforcement officers hold them down. For these patients, the sun has set on verbal de-escalation and oral medications.

THE PERILS OF PHYSICAL RESTRAINTS

Sometimes it is necessary to physically restrain patients at risk of harming themselves or others, but this comes with risk. When patients are flopping around, they can flop off the gurney or even flip the gurney itself! They are at risk for extremity injuries, asphyxiation, aspiration, lactic acidosis, stress cardiomyopathy, pressure ulcers, thromboembolism, and even death.^{2,3} Additionally, the nurses and health care team members placing the restraints are at risk for eye injuries, orthopedic injuries, negative emotional reactions, and fear.¹ Despite this, restraints are often necessary, and when this occurs there are a few tips to keep in mind.

Physical restraints should be followed promptly by chemical restraints, ie, calming agents. Patients can be injured by fighting against the restraints. If they are agitated enough to require physical restraints, they most likely need chemical assistance in calming down.

Once you have made the decision to restrain the patient, restrain the patient. The difficult decision should be whether to restrain, not how to restrain. Either restrain all 4 extremities or none at all. Placing just 1 or 2 extremities in restraints puts patients at increased risk for twisting and

turning themselves into a bed sheet asphyxiation disaster or partially removing themselves from a gurney, hanging on to the side until it flips over onto them. Restraining 3 extremities seems to be a setup for patients to use their remaining limb aggressively. If they are dangerous enough to be in restraints, avoid leaving them with the ability to kick someone in the face. It also helps reduce kicking if the right leg is tied to the left corner of the gurney and the left leg is tied to the right corner of the gurney, although there is no consensus about how to tie the legs.^{4,5}

Patients in physical restraints need close monitoring and the restraints should be removed as soon as safely possible.

“WE HAVE THE DRUGS, THEY HAVE THE RECEPTORS”

As Billy Mallon says, “We have the drugs, they have the receptors, why are they apart?”⁶ As Miner et al have described, there are many options for chemical sedation, a lot of opinion, and a ton of conflicting evidence about what agent is best to use when.

Antipsychotics are a good option because many agitated patients have underlying psychiatric illness. Because obtaining intravenous access in these patients is extremely challenging and potentially unsafe, intramuscular options (haloperidol, droperidol, risperidone, olanzapine, and ziprasidone) are often the preferred and safest approach. Despite a black box warning on droperidol, there are many studies demonstrating its safety.⁷⁻¹² Adverse effects to be aware of are extrapyramidal syndrome and QT-interval prolongation. The QT-interval effects are unlikely to be clinically significant and rarely precipitate torsades de pointes.^{7,10}

Benzodiazepines have relatively quick onset, are safe, and can be rapidly titrated to effect. They can be used alone or in combination with antipsychotics. They are particularly effective for patients who have ingested cocaine or methamphetamines. Patients should be monitored for hypotension and respiratory depression,⁴ although significant untoward effects are rare unless there is a mixed ingestion.

Diphenhydramine can be often mixed into the “B-52” (Benadryl, 5 mg of haloperidol, and 2 mg of lorazepam). Diphenhydramine is sedating and may also temper the extrapyramidal effects of antipsychotics; however, it is another agent that potentially prolongs the QT interval.^{13,14}

What about emergency medicine’s golden child, ketamine? It’s good for procedural sedation, intubation, asthma, analgesia, and...rapidly controlling an acutely agitated and potentially violent patient. The American

College of Emergency Physicians’ (ACEP’s) 2017 clinical policy¹⁵ recommends ketamine to help gain control over violent or agitated patients in the right clinical setting, although the patient will need close monitoring until awake and alert.

WHAT AGENT TO USE WHEN?

Most of our acutely agitated patients are undifferentiated, and thus gearing treatment to a specific pathology can seem impossible. Is it a sympathomimetic? pure psychiatric disturbance? a mixed picture: a psychiatric patient intoxicated on alcohol and methamphetamine?! Even worse, is it a trauma patient with a head bleeding event who is altered, agitated, intoxicated, and hypoxic? As well as addressing any medical causes, differentiating between the causes of agitation can help identify the appropriate therapy and improve treatment.

If you suspect agitation from acute psychosis, the antipsychotics are a natural choice. Pairing an antipsychotic with a benzodiazepine has been shown to achieve more rapid calming.¹⁶ There is no definitive evidence that one antipsychotic is superior to others, but they have been shown to be superior to placebo.¹⁷⁻¹⁹ Antipsychotics may need repeated dosing.

Alcohol intoxication causing agitation can be treated with antipsychotics as well. For these patients, benzodiazepines may cause oversedation and hypoventilation in high doses.

If you suspect agitation from sympathomimetics, then benzodiazepines are your friend. Whether from methamphetamine, cocaine, or some of the synthetic marijuana products that cause hyperadrenergic agitation, pure sympathomimetic overdose victims remain agitated only when you have not used enough benzodiazepines. A calm quiet room will also help, and the agitated patients themselves are typically their own barrier to this intervention.

Patients with excited delirium represent a category of their own and require aggressive intervention to avoid bad outcomes. They are violent, shouting, hyperactive, and hyperthermic; have unexpected strength; and may progress to sudden cardiopulmonary arrest, even with intervention!²⁰ When someone is an imminent threat, providers must control the situation quickly to prevent harm. Ketamine can be the answer in these situations. De-escalation is futile and the patient must be sedated immediately to maintain safety. Ketamine is often the best answer because it is very effective and has rapid onset of action.²¹ Additionally, it can be used as a rescue medication if other agents fail to achieve adequate control.²²

Finally, what about the undifferentiated patient who is agitated, cannot be verbally de-escalated, but is not violent? If he or she is willing to receive medications by mouth, such as a dissolvable antipsychotic, that is often the best place to start. If the patient is escalating and becoming combative, it is dealer's choice. Haloperidol or droperidol can be administered in the same syringe as either midazolam or lorazepam. Midazolam has a quicker onset of action than lorazepam²³ and may achieve calming more rapidly than the antipsychotics.²⁴ Anyone who has completed training in recent years in the United States likely did not have the opportunity to use droperidol, but if you have it then it can be an effective single agent (you will like it!).

THE TAKE-HOME POINTS

Try to treat the underlying cause of agitation. Choose the mildest effective intervention; verbal de-escalation and oral medications are a great place to start. Protect your patients and your staff by controlling the situation, using physical restraints and calming medications when needed. When faced with patients in excited delirium, aggressive management is necessary to ensure appropriate care.

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