



The Agitated Patient in the Emergency Department

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On day 1 this 22 yo male is brought to ED for strange and unruly behavior at home. His mother had brought him in because he had not slept for the past 4 nights, was not eating, was pacing the apartment “damning people to hell” and stating “Jesus is coming”. Both mom and the patient denied any drug use. The patient had no past medical history, was not on any medications, and had no allergies. He agreed to speak to a psychiatrist but did not understand why.

On physical exam his vital signs were; BP 130/75, pulse 90, respirations 14, temp. 98.5. He was well kept and mildly agitated. HEENT: EOMI, PERLL, neck supple. Heart: S1S2 RRR no MRG. Lungs: clear to bases. Abdomen: soft, nontender, no masses. Extremities: atraumatic, no C/C/E. Neuro: strength 5/5, sensory intact, normal gait.

Laboratory workup included: CBC = normal, Chem = normal, urine toxicology screen = negative, serum toxicology screen and alcohol = negative.

The psychiatric assessment was mania. The patient was not felt to be a harm to himself or others, and he agreed to take lorazepam. He was given a follow up appointment in 2 days.

On day 2 his mother brought the patient to the front door of the ED. He believed he was there because his mother was sick and needed to be seen. He refused to come into the front door because “the people here are going to kill me”. Mom stated he refused to take the medication he was prescribed and when he got home yesterday began throwing plates, glasses and furniture around the apartment, yelling, “Jesus is coming, here I am”. An ED clerk who he had bonded with him the day before

convinced the patient that no harm would come to him. Once in the ED, the patient refused to enter a room, or be examined, instead pacing up and down the main hall yelling, “Jesus is coming, here I am”. When security approached him he attempted to punch one of the officers.

Key Clinical Questions:

Who should be placed in restraints?

What chemical restraints are available?

What is the legality of restraints?

Key Learning Points

- In determining which patients need to be placed in restraints the first thing to assess is the competency of the patient. Next, an EM physician must weigh the patient's right to autonomy with that of the patient's health and the safety of the ED staff. Once the decision to restrain a patient is made use a team approach.
- The decision of which chemical restraint to use is first addressed by determining if the patient is willing to assist in his care by taking oral medication. If the patient is unwilling or unable to take oral medication then IM medication should be considered. The most common oral antipsychotic medications are haloperidol and risperidone. The most common IM antipsychotic medications are haloperidol and ziprasidone. The atypical antipsychotics have a decreased incidence of EPS when compared to the classic antipsychotics. Frequently the antipsychotics are combined with a benzodiazepine such as lorazepam.
- The legality of restraints assumes that the EM physician will first and for most protect the patient. If the patient is at risk of doing eminent harm to himself, staff or a third party he should be restrained. The legal issues with restraints more often involve how a patient was restrained and not whether a patient should have been restrained or not. This is why documentation is so important.

Introduction and Presentation

Though the ED is the “safety net” for society it is not uncommon for ED personnel to be placed in harms way when helping an agitated or violent patient. Agitation is defined as an abnormal increase in psychological or motor hyperactivity. In one study of violence in the ED 80% of respondents reported at least one ED staff member had been injured by a violent patient in the preceding five years and 43% reported physical attacks on staff at least once/month. 53% of all hospital assaults occur in the ED. In a survey of 170 hospitals, 23 reported weapons threats each month, and 32 restrained at least one patient a day. (Hill and Petit 301-15, x)

All emergency medicine personnel need to be aware of the signs and symptoms of potential violence. Any patient can become violent, but patients with organic disorders such as dementia, delirium, and chemical intoxication have a higher incidence of violence, as do functional disorders such as mania and schizophrenia. The following is a list of “early warning signs” of violence: 1. Patient exhibits or threatens violence. 2. Patient makes ED staff anxious or fearful. 3. Behavior alternates between shouting and dozing, and between cooperation and belligerence. 4. Patient expresses fear of losing control. 5. Patient is uncooperative, hostile, agitated and unable to sit still. 6. Patient is intoxicated with alcohol or other chemicals or withdrawing from drugs. 7. Patient has a past history of violence. He is a “Frequent flyer” known to police or ED staff for violence or impulsive behavior. 8. Patient has tense, rigid posture, is easily startled and suspicious. 9. Patient has tattoos that suggest a relationship to a violent organization or gang. A tattoo that says “Mother” is not the same as a tattoo that says “Born to Kill.” All of these warning signs should be taken seriously and when recognized should be discussed among the staff in order to protect the patient and the staff from harm.

Avoiding Violence

Many patients who become violent are fortunately not violent from the moment they come through the door. This allows the staff to prepare but it also allows for alternative measures to restraints to be employed. A doctrine called “the least restrictive method of restraint” should be employed when dealing with the potentially violent patient. This means that a patient should be provided alternatives to correct inappropriate behavior in order to maintain a good working doctor/patient relationship and to maintain the dignity of the patient. (Allen et al. 1-88) There are a number of important things to keep in mind in order to avoid escalating a potentially violent situation. These methods of “talking a patient down” include: 1. Avoid eye contact with patient. 2. Do not block exits and leave the door to the exam room open. 3. Maintain a good distance from potentially violent patient; do not invade the patient’s “space”. 4. Adopt passive, non-confrontational posture and attitude, and allow patient to ventilate his feelings. Develop a therapeutic alliance with the patient. 5. Treat the patient as you expect him to behave. 6. Offer the patient food or drink. 7. Do not make challenging, provocative, or belligerent remarks. 8. If the patient acts out, tell the patient directly “your behavior is frightening others and we cannot allow such behavior”. 9. Do not turn your back on potentially violent patient. 10. Never underestimate the potential for violence. This should be the initial approach to all potentially violent patients. Lastly, if in spite of reasonable measures by ED staff, the patient’s conduct continues to escalate, the ED physician should try to enlist the help and influence of the patient’s

family or friends. The use of family and friends can have a profound influence on a patient's behavior; however, it needs to be understood by the "helper" that he/she is working with the staff to modify the patient's behavior and not to escalate a potentially dangerous situation. The last thing the ED staff needs is to go from one potentially violent patient to two or more.

The American College of Emergency Physicians (ACEP) has a clinical policy statement regarding the hospital's responsibilities to ensure safety and security for patients and staff in the ED. These responsibilities include: Provide adequate security personnel, physical barriers, surveillance equipment, and other security systems. Coordinate these security systems with local law enforcement. Have written protocols in the ED for dealing with violence. Educate staff on preventing, recognizing and dealing with potentially violent situations. This policy statement, as well as others, can be found on the ACEP website (www.acep.org).

The Decision to Use Restraints

Once the use of less restrictive methods of modifying the patient's behavior, such as "talking them down" have failed then the use of restraints may become necessary. The doctrine of "the least restrictive method of restraint" applies here as well. (American Psychiatric Association Task Force on the Psychiatric Uses of Seclusion and Restraint. Seclusion and Restraint: The Psychiatric Uses.) Providing the patient with options for modifying his/her behavior allows a patient/doctor relationship to be maintained. A patient may choose one method of restraint over another (i.e. Agree to seclusion over physical restraints). If it is not possible to engage the patient, and have him/her participate in their treatment, and the situation presents a risk of injury to the patient or staff then it becomes necessary to use force to restrain the patient. This should be done with a team approach that is well rehearsed, in which all the participants understand their role. This can be done in the following manner: Placing 4-5 security officers in clear view of the patient, but 10-15 feet distant. The ED physician should then notify the patient in a firm, but not threatening voice, that the continuation of the patient's uncontrolled and disruptive behavior will not be allowed, and that the patient will be restrained by "the team" unless he lies down now on the ED cart and cooperates with the medical staff.

Methods of Restraints

Seclusion:

The placing of a patient alone in a locked room from which he/she cannot leave is seclusion. It is considered a form of restraint and therefore needs to be monitored, usually by video surveillance, and the reason for seclusion documented in the same way as other restraints. This is often considered the least restrictive form of restraint but many emergency departments do not have the necessary room to allow for seclusion. The specific room in which a patient is secluded must be observable, devoid of any potentially harmful objects and meet the local health code for such rooms. If the patient does not respond to seclusion then physical restraints may be necessary.

Physical restraints:

Physical restraints should be used if, in the ED physician's medical opinion, the patient is a danger to themselves, other patients or the staff. Also, the ED physician can use "good faith" restraints to allow evaluation and treatment of an uncooperative incompetent patient (such as a patient with dementia). If physical restraints are to be used, they should be used properly and restraints must be adequate. Use of physical restraints:

1. Team approach, ideally with six members, one for each extremity, one for head, and one to apply restraints. The team members should remove all objects from themselves which could be used as weapons by the violent patient, i.e., ID pins, reflex hammers, pagers, stethoscopes around neck of staff, etc. Team should advance as a unit from all directions, restraining their assigned extremity. Team members should wear protective gear, at least gloves, to minimize possible contamination of themselves.
2. Generally all violent patients need four limb restraints.
3. Explain to patient that the restraints are being applied for his protection and the protection of others, as he cannot seem to control his behavior. Do not negotiate. Emphasize the therapeutic reasons for the restraints, not the punitive.
4. Can apply soft cervical collar that may also restrict patient's range of motion and minimize head banging and biting.
5. Patient should be kept in open area where he can be observed and monitored. Change position of restrained extremities often and check for neurovascular function.
6. Undress patient and search for concealed weapons or chemicals after the restraints are applied.
7. The ED physician must document fully the reasons the restraints were necessary.
8. Make the entire restraint procedure a team effort, like a cardiac arrest resuscitation, with assigned functions.

Chemical restraints:

The order in which restraints are used does not need to be physical and then chemical. If the patient is willing to take medication prior to the use of physical restraints then give him/her the medication. Often patient just want to get back on their medications in order to feel better (stop the voices) and so will take medication with better cooperation than physical restraints. Chemical restraints can also be used after physical restraints if the patient continues to struggle against the restraints and shows a persistence of uncontrolled behavior. Gather as much history, physical exam, and laboratory information as possible after physical restraints and before chemical restraints, as medications may alter the patient's behavior, rendering diagnosis difficult. Consider contacting the psychiatric consultant before chemically restraining the patient, as the consultant may wish to see and examine the patient before medications are used.

Once the decision to use chemical restraints is made it becomes a question of what medications should be used. In 1987 Clinton et al. published a series of 136 cases of "disruptive" patients, the majority of who were intoxicated, that received IM/IV/PO haloperidol with an 83% efficacy rate within 30 minutes. (Clinton et al. 319-22) In 1997 Battaglia et al. published a prospective,

randomized, double blind study of 98 psychotic, agitated emergency department patients that received one of three possible treatment options; lorazepam (2mg), haloperidol (5mg) or both. Battaglia found that all three treatment groups were effective at decreasing agitated behavior as measured by Agitated Behavior Scale and Brief Psychiatric Rating Scale with the most rapid tranquilization occurring with the combination treatment.(Battaglia et al. 335-40) There are two major side effects that are noteworthy in this study. First, is that in all three treatment groups at least 35% of the patients were still asleep at 12 hours after the medication was initiated. It is important to note that the majority of patients received 2-3 doses of medication. Second, is that between 6% and 20% of patients receiving haloperidol experienced extrapyramidal symptoms (EPS). Sedation can be both a positive and negative effect. Positive, because it decreases the behavior that required medication and provides safety for the staff. Negative, because it may prolong disposition of the patient from a busy ED and in extreme circumstances may require monitoring or intervention. The combination of a neuroleptic, such as haloperidol or droperidol, with a benzodiazepine, such as lorazepam, has been the mainstay of treatment for the violent patient in the ED.

Droperidol has been used extensively for both its antipsychotic and antiemetic effects. In 2001 the FDA placed a black box warning on the use of droperidol in patients with prolonged QT. It has been shown that droperidol, along with many other medications, can produce prolongation of the QT interval which then increases the risk for developing torsades de pointes and other serious cardiac arrhythmias.(Glassman and Bigger 1774-82). The FDA warning has effectively removed droperidol from many hospital formularies though some authors believe that the evidence for the warning is small. (Kao et al. 546-58) In addition, Martel et al. recently publish a review of 396 patients that received droperidol in the ED and found no change in the QTc interval or occurrence of ventricular arrhythmias in critically ill patients who received droperidol.(Martel et al. 510-11) It is interesting to note that one of the causes of prolonged QT is hypokalemia and that acutely psychotic or agitated patients have been found to have a prolonged QT which may be associated with the hypokalemia that is seen in agitated patients.(Hatta et al. 279-85;Hatta et al. 85-88)

Atypical Antipsychotics:

In the past several years' atypical antipsychotics have become available. Classic antipsychotics block the D2 dopamine receptor. The atypical antipsychotics block the 5-HT2 serotonin receptor with relatively low D2 blockade. The blockade of this combination of receptors, particularly the higher ratio of 5-HT2 to D2 blockade, is believed to be responsible for the low incidence of EPS seen with these medications. (Buckley 52-60;Goldberg 211-+) A number of medications fall into this category; clozapine (Clozaril), olanzapine (Zyprexa), quetiapine (Seroquel), risperidone (Risperdal), and ziprasidone (Geodon).

All of these medications have been studied in the treatment of acute psychosis and agitation. However, clozapine is not used because at the doses needed to effect an immediate change in behavior there is a risk of serious side effects such as seizures and agranulocytosis. In addition, quetiapine is not used because it carries a recommendation of slow titration and so cannot be used at the doses needed to change behavior abruptly.(Currier 21-26) Olanzapine has a potentially beneficial sedating effect because it has 160 times the antihistamine potency of diphenhydramine but it has been associated with weight gain and the development of diabetes mellitus.(Currier 21-26) Risperidone has been found to be equivalent to haloperidol in the treatment of psychosis and may be more effective than haloperidol in treating

aggression.(Currier 21-26;Czobor, Volavka, and Meibach 243-49) In a comparison of oral risperidone (in combination with oral lorazepam) with IM haloperidol (in combination with IM lorazepam) the two drug combinations were found to be equivalent both in overall efficacy and onset of action. The mean time to sleep was 43 minutes in the risperidone group and 44 minutes in the haloperidol group.(Miller et al. 69-75) Risperidone comes in both a liquid and dissolving tablet formulation. This can be important if you are worried about the patient “cheeking” the medication and thus non-compliance. When trying to maintain some autonomy for the acutely agitated patient it is convenient to be able to offer him/her a choice of oral or IM medication. Oral is often preferred if the patient is willing to take the medication.

However, in the ED the ability to give medication via the intramuscular route is often necessary for the treatment of the acutely agitated patient who is unwilling to take oral medication. Ziprasidone is currently the only IM atypical antipsychotic on the market, though Olanzapine is being studied.(Jones, Taylor, and Meehan 22-24) Ziprasidone has been studied in agitated psychotic patients and was found to be effective at dosage range of 10 to 20 mg.(Lesem 209;Daniel et al. 128-34) In addition, when comparing haloperidol and ziprasidone in the treatment of acute psychosis, Brook et al. found that ziprasidone was significantly more effective at reducing the symptoms of psychosis as measured on the Brief Psychiatric Rating Scale (BPRS). They also found that there were significantly less movement disorder side effects with ziprasidone. (Brook, Lucey, and Gunn 933-41)

Taken together the atypical antipsychotics have a decreased incidence of prolonged QT when compared to the classic antipsychotics though this has been shown to be dose related and to vary between the medications with olanzapine having the smallest change in QT interval and ziprasidone having the largest.(Goldberg 211-+;Czekalla, Kollack-Walker, and Beasley, Jr. 35-40;Czekalla et al. 191-98) EPS is also decreased in the atypical group compared to the classic antipsychotics. As mentioned above this is believed to be related to the ratio of 5-HT2 to D2 receptor blockade. This ratio may explain why clozapine has very few EPS and risperidone is intermediate between clozapine and classic antipsychotics.(Miller et al. 69-75)

Legality of Restraints

The decision to place a patient in restraints is often complicated, and sometimes anxiety provoking, for EM physicians. There are three things that need to be considered when deciding about the use of restraints in any given situation. First, is the patient competent to make decisions about his/her health care? Competency is defined as the capacity or ability to understand the nature and effects of ones actions or decisions. Patients are presumed competent until it is determined by actions or expressed thoughts that they are not. In general, the law implies consent during an emergency.(Rice and Moore 13-30) However, it is important to note that though in the ED a patient does have the right to refuse certain options in their treatment.(Annas 1408-12) The second condition is the duty to protect the patient and other ED staff. A Supreme Court decision in 1981, Youngberg v. Romero, stated “Restraints are justified to protect others or self in the judgment of the health professional”.(Hill and Petit 301-15, x) As noted in the introduction, violence occurs frequently in the ED and thus protection of the staff as well as the patient is necessary. The last condition is the protection of third parties. It has been upheld in the courts that physicians, due to their unique relationship with patients, must bear the responsibility of

protecting people to whom the patient threatens to do harm. In other words, if a patient is threatening to kill someone it is the responsibility of the physician to either detain that patient for medical or legal evaluation, or notify the third party of the threat.(Rice and Moore 13-30)

It is the responsibility of the ED physician to ensure that restraints are not negligently performed. In October 1998 the Hartford Courant published a survey that found that 142 patients had died while in restraints or seclusion. In the wake of this information HCFA published regulations for the use of “restraints for acute medical and surgical care”.(Annas 1408-12) In a recent prospective study of 221 patients restrained in the ED, Zun et al. found that there was a 5.4 percent incidence of minor complications, the two most frequent being, getting out of restraints and injury to staff. There were no major complications in this study (death or disability).(Zun 119-24) It is important to note that each state, though covered by federal law, has its own set of laws governing the rights of patients and the restriction of those rights by health care workers. Each state has an advocacy group whose job it is to ensure that the rights of patients with disabilities (including the mentally ill) are upheld. Because both the state law and the responsibility of these advocacy groups vary from state to state it is important to know exactly what the regulations are in your state. Each hospital will have its own “restraint policy” that should be reviewed by all EM physicians as it may be very specific about how to restrain patients and who needs to be informed that the patient has been restrained. This raises the issue of chart documentation in patients who are restrained. This too will vary from state to state but in general should include 4 elements. The first thing to document is the reason for restraints (patient has the potential to harm self or others). Second, is what measures have been taken to avoid restraints, such as “talking down” or enlisting family help. Remember the doctrine that restraints need to be the least restrictive possible. Third, is the type of restraints being employed and why. Lastly, is a plan for removal of restraints when the patient exhibits behavior of self-restraint. It is important to note that in general, there has been many more malpractice suits lost by EM physicians for having **NOT** detained a patient who then went on to commit suicide, than there have been suits for unlawful imprisonment.

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Patient Outcome

The patient was physically restrained by 4 security officers, a nurse and a physician. This calmed him considerably and he agreed to take 2mg of risperidone and 2 mg of lorazepam orally. The patient was ultimately admitted to the psychiatry locked ward with a diagnosis of mania with psychotic features.

Annotated Bibliography

1. Battaglia, J. et al. "Haloperidol, lorazepam, or both for psychotic agitation? A multicenter, prospective, double-blind, emergency department study." Am.J.Emerg.Med. 15.4 (1997): 335-40.

This is the classic article that compared haloperidol, lorazepam and the combination of the two in agitated patients in the ED. All three treatment groups showed a decrease in agitation as measured by the Agitated Behavior Scale, Brief Psychiatric Rating Scale and the Clinical Global Impressions scale. The combination of haloperidol and lorazepam was more effective at decreasing agitation when compared with haloperidol alone or lorazepam alone. The only negative side effect noted with this combination of medications is an increased length of time that patients were asleep.

2. Hill, S. and J. Petit. "The violent patient." Emerg.Med.Clin.North Am. 18.2 (2000): 301-15, x.

This is an excellent review article by an emergency physician about the overall care of the violent patient in the ED. It provides a comprehensive algorithm for assessing violent behavior and providing interventions in a stepwise manner. The review includes a discussion of patient's rights and the various methods of restraints.

3. Currier, G. W. "Atypical antipsychotic medications in the psychiatric emergency service." J.Clin.Psychiatry 61 Suppl 14 (2000): 21-26.

This article provides a brief review of the atypical antipsychotics. It concentrates on the comparison between haloperidol and risperidone. The author concludes that risperidone is as efficacious at treating psychosis as haloperidol with significantly less side effects, particularly EPS.

4. Miller, C. H. et al. "The prevalence of acute extrapyramidal signs and symptoms in patients treated with clozapine, risperidone, and conventional antipsychotics." J.Clin.Psychiatry 59.2 (1998): 69-75.

This article provides a comparison of the EPS effects of two atypical antipsychotics, clozapine and risperidone, and conventional antipsychotics. 106 patients were treated for at least 3 months. The prevalence of akathisia in the clozapine group was 7.3%, 13% in the risperidone group and 23.8% in the group treated with conventional antipsychotics. There is a very good explanation about how the ratio of 5-HT₂ receptor blockade to D₂ receptor blockade may determine the incidence of the EPS side effects in the atypical antipsychotics.

5. Annas, G. J. "The last resort--the use of physical restraints in medical emergencies." N.Engl.J.Med. 341.18 (1999): 1408-12.

Though biased and missing some important information this is a compelling look at how restraints can be inappropriately used. The author is a lawyer/ethicist who reviews the changes that have occurred since the Hartford Courant series and the subsequent changes in HCFA regulations. He reviews a complicated case of an asthmatic that refuses intubation, is restrained and intubated against her will and survives. Then 2 years later the patient will not seek help, because of the psychological trauma of the restraints, when suffering another asthma attack and dies. Though this case is not about mental illness and restraints it has a very good discussion about patient autonomy and rights.

Questions

1. The early warning signs of potential violence in a patient include all of the following except:

- a. The patient is intoxicated
- b. The patient expresses fear of losing control
- c. The patient assumes a tense, rigid posture
- d. The patient's family is in the waiting room worried about him
- e. The patient has gang tattoos on his arm

2. Methods that should be used prior to restraining a patient include all of the following except:

- a. Telling the patient in a firm manner his behavior is inappropriate
- b. Offering the patient options with his treatment
- c. Threatening the patient with restraints
- d. Enlisting the help of family or friends to help calm the patient
- e. Offering food or drink

3. The number of people who should assist in restraining a patient is:

- a. 3
- b. 4
- c. 5
- d. 6
- e. 7

4. All of the following are antipsychotics that can be used as chemical restraints in the ED except:

- a. Haloperidol
- b. Risperidone
- c. Clozapine
- d. Ziprasidone

5. All of the following are important considerations when thinking about the legality of restraints except:

- a. The competency of the patient to refuse medical care
- b. Will the patient injure himself?
- c. The patient's mother thinks he should be "committed"
- d. The risk of harm to ED staff
- e. The risk of harm to third party people

Answers

1. Answer d.

If possible enlist the help of family to help calm the patient

2. Answer c.

Do not threaten patients. This will only escalate the level of agitation

3. Answer d.

There are 6 members to a restraining team; one for each limb, one to apply the restraints and one to control the patient's head.

4. Answer c.

Clozapine should not be used for the treatment of the acutely agitated patient in the ED because of the increased risk of seizures and agranulocytosis at the doses that would be required.

5. Answer c.

Though family and friends should be questioned about the behavior of the patient the EM physician must make an independent assessment of the patients behavior and risk of harm.