The goal of caring for a violent patient is first to protect everyone involved and also to diagnose and treat important medical and psychiatric conditions (see the “Priority Actions” box). These goals are best achieved if warning signs of violence are recognized and the safest and most effective means of behavioral control are used.

The epidemiology of violence in the emergency department (ED) is inexact; past surveys suggest that as many as 80% of events are unreported. Still, clear evidence indicates that most EDs experience violent patients routinely. Of greater concern, ED caregivers are often victims. More than 70% of ED nurses have reported being the victim of physical violence during their career. The rate of assault on health care workers is 8 per 10,000, as compared with 2 per 10,000 for all private-sector industries, with the ED being one of the highest-risk areas.

Violence may range from verbal threats to physical assault. Of reported events in one survey, 90% of cases involved the patient and 10% involved family or visitors. A few staff members may be confronted by former patients outside the ED or may become victims of stalking.

Nearly 60% of EDs in the United States have reported an armed threat on a staff member within 5 years. Weapons may be carried by patients, family members, visitors, or even staff members. Patients most likely to carry weapons include those with schizophrenia or paranoid ideation and individuals who have been the victims of gunshot wounds. Many violent patients are intoxicated with alcohol or drugs.

Violence threatens the career longevity of ED staff. Violent events should be regularly reported to police and hospital administration to raise awareness of this societal problem and to encourage safer practice environments.

**KEY POINTS**

- Patient risk factors for violent behavior include evidence of agitation (e.g., pacing), substance abuse, a previous history of violence, arrival at the emergency department in police custody, and male gender.
- Disarming protocols and deescalation techniques are critical methods for prevention of violence.
- Agitated or violent behavior is frequently caused by medical conditions, such as hypoglycemia or intoxication.
- Violent patients should be given a verbal warning before they are restrained. Physical restraint should be supplanted by chemical restraint when safety allows.
- Medical complications of incorrect or prolonged physical restraint include hyperthermia, acidosis, rhabdomyolysis, and death.
- Sedation should be tailored to the suspected cause of the agitation, as well as the desired depth and length of sedation.
- A combination of an intramuscular benzodiazepine (lorazepam) and a butyrophenone (haloperidol) provides consistent sedation for many causes.

**EPIDEMIOLOGY**

**Goals for the Care of Violent Patients in the Emergency Department**

- Recognize risk factors and warning signs before violence occurs.
- Use deescalation (communication) techniques to prevent violent behavior.
- Control the patient and situation to minimize further violence.
- Diagnose and treat reversible causes of agitation.
- Protect the patient and others through appropriate restraint methods.

**HOW TO PREDICT VIOLENCE**

Violent behavior rarely erupts without warning. Risk factors for violence include an escalating psychiatric illness (e.g., schizophrenia, personality disorders, mania), alcohol and drug abuse, a previous history of violence, arrival at the ED in police custody, and male gender (Box 195.1). The use of risk factors to predict violent behavior has not been tested in cohorts of emergency physicians; psychiatrists have been only 60% accurate in predicting violence when using risk factors alone.
Shared content:
may minimize the emotional reactions. A buffer zone of at least four body widths between the provider and the patient is recommended.

When a caregiver feels the urge to shout, argue, or engage in a staring match with a patient, the caregiver is inadvertently reciprocating the violence of the patient. Controlling these natural instincts is an important professional skill that for many requires cultivation and practice. Other caregivers must cultivate a willingness to engage sufficiently because their instinct is to disengage. Too much distance can be equally detrimental. Finding the optimal emotional and physical distance to be effective and caring is a practiced art. If caregivers are too distant, they will be aloof, condescending, or disengaged. If caregivers are too close, they may become stimulated by the patient’s disorder. The right distance enables control and effectiveness.

Box 195.2 Guidelines for the Application of Physical Restraint

Protect the patient’s rights, dignity, and well-being. Use of restraint is assessment driven. Use the least restrictive method. Trained, competent staff should provide safe application of restraint. A time-limited order must be noted on the chart. Document why restraint is necessary—be specific. Protect yourself and others. Act in the best interests of the patient. Use restraints to facilitate medical evaluation or treatment. Nursing documentation should be very thorough. Monitoring and reassessment of the patient’s clinical condition and needs are essential.


MedicAl Clearance

Agitated or violent behavior is frequently caused by treatable medical conditions. Reversible causes of altered mental status and violent behavior should be considered during the initial evaluation of the patient. Such causes include substance abuse, intoxication, glucose abnormalities, hypoxia, trauma, abnormal temperature (hypothermia and hyperthermia), infection, stroke, hypertension, and seizures. Older adults with new agitated behavior, delirium, or psychosis should undergo an extensive inpatient medical evaluation before a first-time psychiatric unit admission.

TreatmEnt

Physical Restraint

Rationale

The use of restraint is indicated when verbal attempts have failed and action must be taken to prevent injury to the patient or staff. Restraint should be used only to facilitate diagnosis and treatment. It is inappropriate to use restraint as punishment or simply to quiet a disruptive patient.7

The Supreme Court case Youngberg v. Romero 1982 provided exception from assault statutes for physicians who restrained patients to protect the patient or others. This physician decision must be made carefully, as rarely as possible, and only under compelling circumstances to ensure safety.

The Joint Commission has published clear guidelines regarding monitoring, documentation, and the application of physical restraint (Box 195.2). Protection of the patients’ rights, dignity, and well-being is of utmost importance. The decision to apply physical restraint should be assessment driven; the provider must evaluate the individual patient in some way before a restraint is applied. It is inappropriate to maintain standing protocols. The selection of restraint should be individualized, and the least restrictive method is preferred; for instance, it is not necessary to restrain an agitated elderly patient with dementia in the same manner as an aggressive, muscular patient with cocaine intoxication. Hospitals must provide adequate training such that competent staff members are available for the safe application of physical restraint at all times.

Box 195.3 Systematic Process for the Application of Physical Restraint

Minimize physician involvement if possible. The restraint team consists of four members and an identified leader:
- The restraint team enters together.
- The restraint team is professional and nonthreatening.
- The leader is at the head of the bed.
- The leader explains the process to the patient.
Limbs are controlled by contact at the major joints. Restraints are attached to the solid frame of the gurney.

Documentation

Documentation differs for physicians and for nursing staff. A time-limited order for restraints must be written on the chart before or shortly after restraints are applied. Providers must document why physical restraints were necessary and must cite that verbal techniques failed to calm the patient. Be specific about the patient’s condition and reasons for restraint, including potential danger to the patient or others, the planned medical evaluation or treatment, and assessment of the patient’s decision-making capacity. Nursing responsibilities include monitoring, frequent reassessment, and documentation of the patient’s condition and personal needs. The advent of electronic medical records and computerized physician order entry presents an opportunity to direct documentation that better meets regulatory requirements.8

Technique

Safe application of physical restraint is best achieved through systematic, consistent, protocol-driven techniques (Box 195.3). Many hospitals have a restraint team of at least five members who respond to the bedside when called by any
Restraint

Physician
Document why physical or chemical restraint was chosen and necessary. Cite that verbal techniques failed to calm the patient.

Record specific information about the patient’s arrival, the reasons for restraint, the potential danger to self or others, the planned medical evaluation, and an assessment of the patient’s decision-making capacity.

Record the initial evaluation by a licensed, independent provider within 1 hour of the patient’s arrival and restraint.

A time-limited order should be charted within 1 hour of the patient’s arrival.

Update restraint orders every 4 hours for adults, 2 hours for adolescents aged 9 to 17 years, and 1 hour for children younger than 9 years.*

Nursing
Frequently reassess the patient’s vital signs, condition, and personal needs.

Patients should then be reassessed every 15 minutes for the following:
- Signs of injury associated with the application of restraint
- Nutrition and hydration
- Circulation and range of motion in the extremities
- Vital signs
- Hygiene and elimination
- Physical and psychologic status and comfort
- Readiness for discontinuation of restraint

*Refer to www.jointcommission.org for more information.

Types of Physical Restraint
The type of physical restraint used is frequently institution specific. Leather and soft cloth restraints are the types most commonly applied to the limbs. Leather restraints are difficult for the patient to remove and rarely compromise the distal circulation; however, they require a special key to remove and are difficult to cut off in an emergency. Soft cloth restraints may tighten as the patient struggles against them, thus causing circulatory compromise. In contrast to leather restraints, soft cloth restraints are simpler for staff to remove by untying knots or cutting with trauma shears. Vest and waist restraints (“posies”) are useful for elderly patients who are at risk for wandering or falls but who not need their limbs restrained.

Positioning
Restraint position may be changed depending on the patient’s clinical status and the needs of the staff. Restraining a patient in the supine position is more comfortable for the patient and allows greater ease of examination. Patients with an increased risk for aspiration should be restrained on their side. Patients should not be restrained in a “hog-tied” position (Fig. 195.1).

Agitated patients are able to generate significant force and momentum and have been known to overturn gurneys if they are not restrained in the proper position. If all four limbs are to be restrained, the patient should have one arm up and one arm down. When only two limbs are restrained, the contralateral arm and leg should be restrained. It is more difficult to generate enough force to overturn a gurney in these positions (Fig. 195.2).

Special situations may arise when additional or alternative restraint is indicated. A sheet may be placed across the patient’s chest and tied to the gurney as a chest restraint when movement of a patient’s torso increases the risk for fall or injury despite the use of four-point limb restraint. Extra attention should be paid to the patient’s respiratory status if a chest...
Chemical restraint is preferred over physical restraint to accept the low-dose anxiolytics are not prudent options. Physical restraint is needed when verbal warnings and voluntary restraint is the administration, generally involuntary. Positional asphyxia results from an alteration in respiratory mechanics with ensuing decreased pulmonary function and increased cardiac output caused by the patient’s position. This change in pulmonary function is not clinically relevant in normal volunteers subjected to prone restraint, however. More recent studies have found that factors related to the excited delirium are more likely to contribute to sudden death in these restrained individuals. Protracted struggle against physical restraint by patients with altered pain sensation may complicate or lead to hyperthermia, increased sympathetic tone with vasoconstriction, and release of lactic acid from prolonged isotonic muscle contractions. Profound metabolic acidosis is associated with cardiovascular collapse in many restraint-related deaths. Cocaine and other sympathomimetic intoxications are frequently seen in this patient population.

Abrasions and bruising account for the majority of complications resulting from restraint. However, serious complications and death can occur if restraints are applied inappropriately or the patient is not adequately monitored. One small subset of physically restrained patients, usually accompanied by law enforcement, suffers cardiac arrest shortly before or after arrival at the ED. For many years their demise was attributed to positional asphyxia related to the prone or hobble position. Positional asphyxia results from an alteration in respiratory mechanics with ensuing decreased pulmonary function and increased cardiac output caused by the patient’s position. This change in pulmonary function is not clinically relevant in normal volunteers subjected to prone restraint, however. More recent studies have found that factors related to the excited delirium are more likely to contribute to sudden death in these restrained individuals. Protracted struggle against physical restraint by patients with altered pain sensation may complicate or lead to hyperthermia, increased sympathetic tone with vasoconstriction, and release of lactic acid from prolonged isotonic muscle contractions. Profound metabolic acidosis is associated with cardiovascular collapse in many restraint-related deaths. Cocaine and other sympathomimetic intoxications are frequently seen in this patient population.

Patients delivered to the ED who are restrained in a prone or hobble position should be turned onto their side. Patients who have been struggling against restraint should receive aggressive fluid resuscitation while evidence of associated metabolic acidosis or rhabdomyolysis is excluded. Aggressive chemical sedation should be administered to patients who continue to struggle against physical restraint.

**Complications**

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**Chemical Restraint, Anxiolysis, and Sedation**

**Rationale**

Chemical restraint is the administration, generally involuntarily, of medications to control a patient’s dangerous behavior. Ideally, before violent behavior erupts, patients should be offered voluntary treatment with anxiolytics or sedatives to prevent the need for acute, involuntary behavioral control. Patients with the potential for violence often go to the ED voluntarily because they know that they need help and treatment. Experienced, wise caregivers offer an anxiolytic when it is evident that patients have poor self-control and a propensity for violence. Early provision of oral medication can maximize safety, patient comfort, and mutual trust. Chemical restraint is needed when verbal warnings and voluntary acceptance of low-dose anxiolytics are not prudent options. Chemical restraint is preferred over physical restraint to control a violent patient, but these methods are often properly used together for rapid control of dangerous behavior. Physical restraint should be used for as brief a period as possible. Chemical restraint should be more broadly applied because sedation and anxiolysis are more preferable.

Many patients with a history of chronic psychiatric conditions know, accurately, that they have the right to refuse antipsychotic medication in nonemergency settings. However, this right does not extend to patients who are acutely combative and in whom violent behavior threatens life or limb by failure to become calm through verbal or physical means. Although it is difficult to accurately predict the cause of agitated behavior, the choice of chemical restraint agent should be tailored to the suspected cause of agitation, the optimal duration of sedation, and the depth of sedation needed.

**Butyrophenones**

Butyrophenones (haloperidol and droperidol) constitute the main class of typical antipsychotic medications recommended for an undifferentiated patient with acute agitation in the ED. The butyrophenones are considered high-potency antipsychotic agents because of their strong affinity for the dopamine 2 (D2) receptor in comparison with other typical antipsychotic agents. As a result of this affinity, the butyrophenones are more effective, cause less hypotension, and have fewer anticholinergic effects than older agents do.

Absolute contraindications to the use of butyrophenones include allergy to this class of drugs, anticholinergic drug intoxication, and a history of Parkinson disease. Relative contraindications include pregnancy, lactation, and hypovolemia. Butyrophenones are widely reported to decrease the seizure threshold, yet no conclusive evidence supports this observation, particularly in patients with sympathomimetic use.

The most common complications of the use of butyrophenones are related to extrapyramidal symptoms, which occur in less than 10% of patients within the first 24 hours of ED care. Dystonic reactions and akathisia are the most common manifestations of extrapyramidal symptoms requiring treatment in the ED. Akathisia is frequently misdiagnosed as psychiatric decompensation when it is manifested as restlessness, pacing, tension, and irritability. Extrapyramidal symptoms are treated with either benztpine (Cogentin), 2 mg, or diphenhydramine (Benadryl), 50 mg, intramuscularly or intravenously. Doses may be repeated every 5 minutes up to three times. Relief is rapid and dramatic in most cases. Benzodiazepines may be added for patients who do not respond initially. Many international providers use haloperidol in combination with promethazine because of its antihistamine and sedating properties. Studies show that this combination provides deeper sedation and requires less additional medication at 4 hours than an atypical antipsychotic does alone.

As with other neuroleptic agents, neuroleptic malignant syndrome has been reported with the use of butyrophenones (Table 195.1). This potentially fatal complex of autonomic instability is marked by high fever, muscle rigidity, and altered mental status. Aggressive symptomatic treatment includes cooling, benzodiazepines, dantrolene, and discontinuation of the offending agent.

**Haloperidol (Haldol)** Haloperidol may be given in 2.5- to 10-mg increments at 30- to 60-minute intervals for adults. Its onset of action is between 15 and 30 minutes and
Table 195.1 Managing Acute Complications of Sedation with Antipsychotic Agents

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute dystonic reaction</td>
<td>Discontinue antipsychotic medication</td>
</tr>
<tr>
<td></td>
<td>Benztpine (Cogentin), 2 mg IM</td>
</tr>
<tr>
<td></td>
<td>Discharge with benztpine (Cogentin), 2 mg PO qd for 3 days</td>
</tr>
<tr>
<td></td>
<td>or</td>
</tr>
<tr>
<td></td>
<td>Diphenhydramine (Benadryl), 50 mg IM</td>
</tr>
<tr>
<td></td>
<td>Discharge with diphenhydramine (Benadryl), 25-50 mg PO qid for 3 days</td>
</tr>
<tr>
<td>Akathisia</td>
<td>Benztpine (Cogentin), 1-2 mg IM/IV/PO qd to bid</td>
</tr>
<tr>
<td></td>
<td>or</td>
</tr>
<tr>
<td></td>
<td>Diphenhydramine (Benadryl), 50 mg IM/IV/PO tid to qid</td>
</tr>
<tr>
<td></td>
<td>Lorazepam (Ativan), 1-2 mg PO</td>
</tr>
<tr>
<td>Hypotension</td>
<td>Lie the patient flat</td>
</tr>
<tr>
<td>Profound hypotension or cardiac arrest</td>
<td>Normal saline bolus, 250-500 mL (repeat as tolerated and clinically necessary)</td>
</tr>
<tr>
<td></td>
<td>Phenylephrine (Neo-Synephrine), 0.005-0.02 mg/kg (0.35-1.4 mg for 70-kg adult) as a bolus IV every 10-15 min as needed</td>
</tr>
<tr>
<td>Increased temperature without other signs of NMS</td>
<td>Discontinue antipsychotic medication</td>
</tr>
<tr>
<td>Increased temperature with signs of NMS (lead pipe rigidity, diaphoresis, labile blood pressure, tachycardia, urinary incontinence, altered mental status)</td>
<td>Monitor closely for signs of NMS</td>
</tr>
<tr>
<td></td>
<td>Cool the patient</td>
</tr>
<tr>
<td></td>
<td>Add a benzodiazepine for sedation</td>
</tr>
<tr>
<td></td>
<td>Discontinue antipsychotic medication</td>
</tr>
<tr>
<td></td>
<td>Use active cooling measures</td>
</tr>
<tr>
<td></td>
<td>Add a benzodiazepine for sedation</td>
</tr>
<tr>
<td></td>
<td>Consider neuromuscular blockade (paralysis) if temperature &gt;40° C</td>
</tr>
<tr>
<td></td>
<td>Institute aggressive hydration and alkalinization of urine to prevent renal failure from rhabdomyolysis</td>
</tr>
<tr>
<td></td>
<td>Dantrolene indicated for malignant hyperthermia but of unproven clinical benefit for NMS</td>
</tr>
</tbody>
</table>

bid, Twice daily; IM, intramuscularly; IV, intravenously; NMS, neuroleptic malignant syndrome; PO, orally; qd, once daily; qid, four times daily; tid, three times daily.

its duration is 4 hours. Although a dosage ceiling has not been established, it is unusual to require more than three doses to achieve adequate sedation for an acute episode. It is rare to administer more than 60 mg in a 24-hour period.19

Though uncommon, the use of haloperidol in violent pediatric patients is well described. The pediatric dose of haloperidol is 0.075 mg/kg/day, repeated up to every hour (orally) or every 30 minutes (intramuscularly) at a dose of up to 2 mg/day in patients younger than 12 years. Of note, younger children are at greater risk for extrapyramidal symptoms than adolescents because of increased D2 receptor activity at younger ages.20,21

Although haloperidol is frequently given intravenously, this is an off-label use of the medication. Food and Drug Administration (FDA) approval is only for intramuscular or oral use. Prolongation of the QT interval has been observed with high-dose (e.g., 50 mg) intravenous haloperidol.

Haloperidol remains an effective and inexpensive option for the treatment of acute aggression. It is well tolerated if coadministered with an anticholinergic agent.20

DROPERIDOL (INAPSINE) Droperidol has a long history of use for the treatment of acute agitation in the ED. Studies have shown the superiority of droperidol over haloperidol within the first 30 minutes of intramuscular administration. The FDA issued a “black box” warning for droperidol in 2001, however, because of the risk for QT prolongation and ventricular dysrhythmias causing sudden cardiac death. Some authors analyzed the case records cited by the FDA and presented cogent arguments supporting continued use of this drug; these investigators questioned the reasoning behind the “black box” warning.22-24 Administration of droperidol for the treatment of violent patients and migraine headaches is now considered an off-label use of the drug. Droperidol is still approved for intravenous administration to prevent and treat postoperative nausea and vomiting.

Droperidol may be given in 2.5- to 5-mg increments intravenously at 15-minute intervals for adults. The intramuscular dose is 5 to 10 mg. Its onset of action is between 3 and 10 minutes. More than two doses are rarely required to achieve adequate sedation for an acute episode. The time to arousal is approximately 2 hours.19 Droperidol was found to produce more consistent moderate sedation than occurs with midazolam and the combination of droperidol and midazolam together.

Conduction abnormalities can develop with the administration of butyrophenones in high doses. The FDA “black box” warning for droperidol also referred to some cases of conduction abnormalities at low doses. Experts recommend obtaining an electrocardiogram before administering droperidol to patients in the ED, a recommendation that is impractical with an acutely agitated or violent patient. Although many authors disagree with the conclusions of the FDA, it is prudent to avoid the use of butyrophenones in elderly patients,
Benzodiazepines

Benzodiazepines are preferred first-line agents for the acute management of agitation. Benzodiazepines are particularly useful for agitation caused by the ingestion of sympathomimetic agents and alcohol withdrawal. Sedation and mild respiratory depression are the most prominent side effects of benzodiazepines. Therefore, these drugs are quite safe in patients with most medical comorbid conditions. Lorazepam and midazolam are the two prototypic benzodiazepines used for the treatment of violent patients in the ED.

Lorazepam (Ativan) Observational studies have reported that lorazepam is at least as effective as haloperidol in treating patients with acute agitation. Lorazepam is given in 0.5- to 2-mg increments as frequently as every 15 minutes, depending on the patient’s level of sedation and respiratory status. Intramuscular injection is the most common route of administration and is quite reliable. Lorazepam has a shorter half-life than some parenteral benzodiazepines and lacks active metabolites. Lorazepam may also be given intravenously, orally, and sublingually. The time of onset after intravenous or intramuscular injection is between 15 and 30 minutes, and the drug’s effect lasts more than 3 hours. Sublingual or oral administration of lorazepam is a viable alternative route for patients who are cooperative and would benefit from rapid relief of anxiety (Table 195.2). Lorazepam is classified as a class D agent in pregnancy and thus should be avoided in pregnant and lactating women. Pediatric dosing of lorazepam is 0.05 mg/kg with doses of 0.5 to 2 mg orally or intramuscularly. Onset is 30 minutes orally and 15 minutes intramuscularly. The duration of effect is 6 hours orally or intramuscularly.

Midazolam (Versed) Midazolam is particularly beneficial if rapid sedation is required and prolonged sedation is less important. The first ED study describing midazolam for this indication used an intramuscular dose of 5 mg, which provided rapid sedation with a mean time to onset of 18 minutes and arousal at a mean time of 82 minutes. Another study reported the effective sedation time to be 45 minutes for midazolam and more than 2 hours for other agents. Fewer cardiopulmonary effects are seen with the intramuscular administration of midazolam; most authors have reported no difference in vital signs or oxygen saturation in comparison with other agents used to sedate agitated or violent patients when the 5-mg dose was administered. However, other authors have reported increased respiratory depression in patients suffering from alcohol intoxication. The intramuscular dose should be decreased by half in elderly patients or when midazolam is used in combination with opioid agents. Larger doses of midazolam (e.g., 10 to 15 mg intramuscularly) result in greater need for airway adjuncts.

Treatment of oversedation and respiratory depression from the use of benzodiazepines in agitated or violent patients is supportive care (Fig. 195.3). Supplemental oxygen, repositioning, and airway adjuncts such as nasal trumpets suffice in most cases. Active airway management, including jaw thrusts, use of bag-valve-mask ventilation, or endotracheal intubation, is rarely necessary. It is prudent to avoid the use of flumazenil (Romazicon) because of the frequency of epileptogenic coingestion and the use of combination therapy with butyrophenones.

Combination Therapy The combination of lorazepam, 2 mg, and haloperidol, 5 mg, for sedation of agitated psychotic patients was found to be superior to either agent alone when investigators considered the speed of sedation and frequency of side effects. The duration of sedation was longer in patients receiving combination therapy. Lorazepam, haloperidol, and benzotropine (Cogentin, 1 mg) can be administered in the same intramuscular syringe.

Atypical Antipsychotic Medications Second-generation (atypical) antipsychotic drugs became feasible options for the treatment of agitated and violent patients in the ED with approval of the first intramuscular formulation in 2001. Several such medications are now available in intramuscular or rapidly absorbable formulations and are indicated for the treatment of acute agitation in selected patient populations. This class of antipsychotics acts by blocking both D2 and serotonin (5-HT) receptors and provides more tranquilization than sedation. The increased serotonin receptor activity results in fewer extrapyramidal effects. Second-generation antipsychotic agents are available in oral preparations, which allows easier conversion to long-term therapy when compared with the benzodiazepines and butyrophenones.

Atypical antipsychotic agents have been used in off-label fashion for the treatment of behavioral disorders in elderly patients for several years. In 2005, the FDA distributed an advisory describing a higher death rate in demented patients receiving atypical antipsychotic medications versus placebo. It is unclear how this advisory applies to the limited use of these drugs in the ED for acutely agitated elderly patients.

Ziprasidone (Geodon) Ziprasidone is approved for the treatment of acute agitation in schizophrenic and bipolar/ manic patients. Ziprasidone has not been extensively studied.
in patients with undifferentiated causes of agitation in the ED. The typical dose is 10 mg intramuscularly every 2 hours or 20 mg intramuscularly every 4 hours. Ziprasidone is associated with the greatest change in the QT interval of the atypical antipsychotics, comparable with the QT prolongation seen with haloperidol. In addition, ziprasidone needs to be diluted and is not as readily available for use as other agents. No dosing information is available for the use of ziprasidone in children with agitation, but the drug is used for the treatment of Tourette syndrome at a dose of 5 to 40 mg/day.

OLANZAPINE (ZYPREXA) Olanzapine is also approved for the treatment of acute agitation in schizophrenic and bipolar/manic patients in the ED. Olanzapine is available in either an intramuscular or oral disintegrating tablet formulation at 5 to 10 mg. Olanzapine is strongly sedating and demonstrates 160 times the antihistamine potency of diphenhydramine. Olanzapine causes the smallest change in QT interval of the atypical antipsychotics. Long-term use of the drug is associated with weight gain and hyperglycemia. The manufacturer does not recommend the combination of intramuscular olanzapine with a parenteral benzodiazepine. Olanzapine has been approved for use in children at a dose of 0.1 mg/kg. Children younger than 12 years may receive 2.5 mg orally or intramuscularly. Children older than 12 years may be administered the adult dose. Its onset of action is 30 minutes orally and 10 to 20 minutes intramuscularly, with a duration of action of up to 24 hours.

RISPERIDONE (RISPERDAL) Risperidone is equivalent to haloperidol for the treatment of psychosis, and it is possibly more effective in treating aggressive behavior. Risperidone may be administered orally in the ED as a liquid formulation or as a rapidly disintegrating tablet at a dose of 1 to 3 mg. Although both methods of oral administration are easier with a cooperative patient, the liquid formulation can be mixed in a beverage or administered orally by syringe to resistant patients. The mean time until sleep was 43 minutes in one study. Risperidone has fewer anticholinergic properties, thus resulting in less confusion and sedation than with other atypical antipsychotic agents. Pediatric dosing of risperidone is 0.025 to 0.05 mg/kg. Children younger than 12 years may receive a dose of 0.25 to 0.5 mg orally. Pubertal pediatric patients may be administered a dose of 0.5 to 1 mg orally. Doses may be repeated two to four times until sedated. Its onset of action is 30 minutes with a peak concentration in 1 to 2 hours.

ARIPIPRAZOLE (ABILIFY) Aripiprazole is approved for the treatment of acute agitation in patients with schizophrenia and bipolar mania. It is available as a 9.75-mg intramuscular injection and may be repeated every 2 hours. Doses should not exceed more than 30 mg/day. Aripiprazole is equivalent to haloperidol with regard to control of agitation without oversedation. An oral dose of 2 mg is recommended for pediatric patients because of autism-related irritability or bipolar mania.

NEXT STEPS Patients may demonstrate resolution of their agitation in the ED as a result of sleep or the metabolism of offending drugs and alcohol. Patients may be considered for discharge if they have normal mental status without agitation on waking, as long as other acute medical and psychiatric conditions have been addressed. Patients who continue to exhibit violent or threatening behavior, abnormal vital signs, or evidence of psychiatric decompensation require further medical or psychiatric care.
Agitated or violent patients who elope from the ED before full evaluation or resolution of their symptoms represent a significant legal risk to providers, as well as a risk to the safety of themselves and other individuals. Legal authorities should be notified of the elopement of such patients.

**SUGGESTED READINGS**


**REFERENCES**

References can be found on Expert Consult @ www.expertconsult.com.
REFERENCES