

# Assaultiveness in Psychiatric Patients and Approach to Assaultive Patients

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## ABSTRACT

Assaultiveness in psychiatric patients and approach to assaultive patients

Assaults by psychiatric patients are serious occupational exposures for mental health professionals. These assaults may result in injuries, transient or persistent disabilities, severe psychological stress including posttraumatic stress disorder, and death, and cause clinical and economic burden. This issue attracts scant attention when considering its importance. Because these assaults are considered by victims as a part of their jobs and are not verbalized, they do not take legal actions. It has been shown that 5-48% of psychiatrists are subjected to violence by patients and patients' relatives, and 40-50% of residents are physically violated during their 4-year residency training. Other healthcare personnel are also emotionally, verbally and physically violated by patients, patients' relatives and visitors. It is of importance to provide security for staff members who are at high-risk for these assaults and continuous training on these issues should be provided for employees. In this article, the causes of assaults by patients and approaches to assaultive patients (pharmacological treatment and other precautions) are reviewed.

**Key words:** Psychiatry, assault, agitation, healthcare personnel, violence



## ÖZET

Psikiyatrik hastalarda saldırganlık ve saldırgan hastaya yaklaşım

Psikiyatrik hasta saldırılar ruh sağlığı alanında çalışanların mesleki uygulamada karşılaştıkları önemli olaylardandır. Bu saldırılar yaralanma, geçici veya kalıcı sakatlıklar, travma sonrası stres bozukluğu dahil ciddi sorunlar meydana getirmekte ve hatta bazen ölümlerle sonuçlanabilmekte, ayrıca klinik ve ekonomik yüke neden olmaktadır. Konu, önemine oranla az ilgi görmektedir çünkü saldırılar, mağdur personel tarafından, görevinin bir parçası olarak kabul görmekte, dile getirilmemekte ve yasal işleme başvurulmamaktadır. Psikiyatristlerin %5-48'inin hasta ve/veya hasta yakınları tarafından şiddet gördüğü, 4 yıllık asistanlık eğitimi boyunca asistanların %40-50'sinin fiziksel saldırıya uğradığı gösterilmiştir. Yardımcı sağlık personeli de hastalar, hasta yakınları ve ziyaretçiler tarafından sıklıkla duygusal, sözel ve fiziksel şiddete maruz kalmaktadır. Saldırıya maruz kalma riski yüksek olan personelin güvenliğinin sağlanması önemlidir ve çalışanlara bu konularda devamlı eğitim verilmelidir. Bu yazıda hasta saldırılarının nedenleri ve saldırgan hastaya yaklaşım (farmakolojik tedavi ve diğer önlemler) gözden geçirilmiştir.

**Anahtar kelimeler:** Psikiyatri, saldırı, ajitasyon, sağlık personeli, şiddet

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## INTRODUCTION

Assaults by psychiatric patients are serious events that health and emergency service personnel, police and, fire department workers worldwide experience in their occupational practices (1,2). Health personnel working in this area should have adequate information to prevent psychiatric assaults and apply optimal interventions to patients when they are experienced. Perceptions of health personnel at an incident of assault determine responses and approaches to patients. A better knowledge on causes of

assaultiveness will prevent unwanted consequences.

Assaults by psychiatric patients cause serious consequences including injuries, temporary or permanent disabilities and post-traumatic stress disorder and even may end in death in some cases, as well as causing clinical and economic load (2,3). This issue receives scant attention compared to its importance. The causes of this are the perceptions of targeted personnel that the assaults experienced in enclosed; working areas form a part of their duties, leading to lack of expression and application for legal processes (2). Conducted studies demonstrated that

**Table 1: Precautions for basic safety and behaviors that endanger safety****Precautions for basic safety**

- Make sure that all patients are searched for dangerous items thoroughly.
- Keep the door ajar while interviewing patients.
- Keep the room in order and safe.
- Do not leave personal items out in open or leave them in your field of view.
- Sit close to door to enable rapid flight.
- Know how to ask for help.
- Know the places of call or alarm buttons.
- Depend on your clinical perception for patients and potential situations of danger.
- Ask the patients for suicide plans and/or homicidal thoughts.
- Ask the patients for carrying weapons and remove weapons immediately.

**Behaviors that endanger basic safety**

- Allowing patients to keep dangerous items.
- Allowing patients hot beverages, glasses and sharp objects.
- Allowing patient to trap you in corners of rooms.
- Allowing problems and disturbances in team.
- Continuing interviews while feeling under threat or while displaying fear.
- Touching patient and trying to restrain him while alone and the patient is extremely agitated.
- Use of direct and most restrictive methods without using less restrictive methods.
- Leaving an agitated patient alone or unsupervised.

mental health workers had a fairly elevated risk of experiencing assault due to their occupation and that 5 to 48% of psychiatrists were assaulted by patients and/or patients' relatives (4,5). It is thought that risk of being targeted for assaults is two times higher in psychiatry compared to other specialties. It was reported in studies that 40-50% of residents were physically assaulted through a 4-year residency training (6). Another study conducted on psychiatry residents found that two-thirds of residents were not informed on methods of approach to assaultive patients (7). Nurses, who are among the foremost workers in patient care, are frequently assaulted emotionally, verbally and physically by patients, relatives of patients and their visitors (8-10).

### Providing Security

Providing security for personnel who have a high risk of being assaulted is important and workers should receive continuous education on these issues. Flannery and colleagues (11), who conducted a study evaluating features of personnel who were assaulted within a period of 20 years, reported that they were younger, had lower

education and less experience as well as less education in mental health. Studies demonstrate that training helps to reduce incidents of assault. Management of assault prevention includes intra-department training towards applying restraints, careful monitoring of patients prone to violence, training security personnel and helping workers to remain awake and calm (12,13). To stop assaultive patients, learning basic rules of security is important and takes precedence (3,14,15) (Table 1).

The key rule is to make sure that the patients, workers and the subject is always provided with security and that they are well observed for potential assaultive acts of patients. The protection of the patients as well as provision of security for workers is only possible with provision of a well-managed treatment (16).

### Evaluation and Prediction of Assault Risk

The ability to evaluate the risk of violent actions by the patients is closely related with the level of general knowledge of the psychiatrist within his specialty. The patients may sometimes report threats of violence subtly and in a non-specific way (e.g. "I want to hurt or kill someone today"), while they report plans of

**Table 2: Common features of violence and criteria for prediction**

Common Features	Samples
History	Childhood abuse or neglect, past suicide attempt or self-injurious behavior, past violence and/or violence in family
Age and gender	Young (13-25 years), male
Psychiatric factors	Active signs of psychiatric disorder (e.g. commanding auditory hallucinations, persecutory delusions, psychotic thought disorder, hypervigilance) Comorbidity of serious mental disorder with substance abuse Personality disorders Disorders due to substances e.g. intoxication and/or withdrawal (IMPORTANT: Chronic alcoholism is more predictive of violence than acute use of alcohol and risk of violence increases with number of comorbidities)
Emotional factors	Explosive behavior Irritable or angry affect Emotional lability Anger and/or impulsivity Reduced frustration tolerance
Social factors	Inadequate social supports Socio-economical disadvantage Drug noncompliance
Neurobiological factors	Delirium (e.g. HIV/AIDS) Mental retardation Neurological disorders Seizures, structural brain abnormalities Traumatic brain damage

homicide with definite targets in remaining occasions (e.g. "I will kill my wife") (16). It may be said that the perception of subtle threats of assault by the patients especially those that are non-specific and/or non-verbal is related with the occupational and communication skills of the physician. On the other hand, recent studies suggest that aggression in humans and other mammals can be conceptualized in two different groups, such as proactive (predatory, planned and manipulative) and reactive (reactive, impulsive and non-planned) (17-19). It is thought that the proactive aggression is located in behavioral repertoires applied by the person to achieve a specific aim, that it is planned and that it could be related with diagnoses such as conduct and/or anti-social personality disorders. Reactive aggression, on the other hand, appears impulsively, as a reaction to frustration met by the person. It is thought that this type of aggression could be especially related with mood disorders and diagnoses such as borderline personality disorder (18,19). When those propositions are evaluated, it can be posited that elevating frustration tolerance and reducing perceptions

of threat by the patients may reduce reactive aggression while proactive aggression may be observed less frequently in ward environments characterized by structured rules. Regardless of diagnosis and type of aggression, it was reported that the most important predictor of probability of assaultive acts by the patients is past history of violence. Other criteria that can be used to predict assault potential by patients are illustrated in Table 2 (16).

Flannery and colleagues (17), who reviewed results of studies focusing on assaultive behavior in psychiatric patients within a period of 20 years, reported that people with past history of assault and those using substances display more frequent aggression. Aggressive behaviors and threats of violence, even death to the treatment team by patients are observed not only in psychiatric disorders but in other disorders, as well. Primary psychiatric and non-psychiatric disorders related with violence are demonstrated in Table 3 (16).

Therefore, it can be said that non-psychiatric, medical conditions should be definitely ruled out in

**Table 3: Disorders associated with violence****Primary psychiatric disorders (According to DSM-IV)**


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Anti-social personality disorder  
 Borderline personality disorder  
 Conduct disorder  
 Delirium, dementia  
 Dissociative disorders  
 Intermittent explosive disorder  
 Mental retardation  
 Oppositional defiant disorder  
 Post-traumatic stress disorder  
 Pre-menstrual dysphoric disorder  
 Sexual sadism  
 Schizophrenia, paranoid type  
 Substance use disorders (Alcohol related, amphetamine, inhalant and phencyclidine intoxication)

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**Other Causes**


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Intra-cranial pathologies causing dementia, delirium, mood disorders or psychotic syndromes or changes in personality (e.g. trauma, infection, tumor, anatomical disorders, vascular malformation, stroke, degenerative disorders)  
 Drugs  
 Seizures and seizure-like syndromes including ictal, post-ictal and inter-ictal behaviors  
 Systemic disorders causing dementia, delirium, mood disorders or psychotic syndromes or changes in personality (e.g. metabolic, endocrine, infectious, environmental)

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patients displaying assaultive behavior and impulsivity. Disorder of orientation should be searched for, vital signs should be evaluated, the presence or absence of head trauma should be discerned, variations in level of consciousness should be observed and vigilance for “organic” causes should be displayed in the absence of history of psychiatric disorder. Therefore, blood glucose should be measured in all patients. Also, whole blood count, routine biochemical evaluations, calcium, creatine phosphokinase levels, screening for alcohol-substances, computerized tomography or magnetic resonance imaging are necessary. Pulmonary radiography, measurement of arterial blood gases, liver enzymes and thyroid function tests can also help in differential diagnosis (16).

In recognizing agitated patients who are thought to pose risk of assaultive behavior, rapid pacing, psychomotor agitation, threatening speech, tense, ready-to pounce stance, intermittent explosive behaviors, increased and selective attention directed to environment, suspiciousness, paranoid thoughts, carrying guns, weak impulse control, reduced frustration tolerance, emotional lability, anger and impulsivity may help. In evaluation of these patients during

hospitalization, structured measurements such as items added to the Positive and Negative Syndrome Scale for anger, problems in delaying gratification and labile emotionality which are collectively called Aggression Risk Profile, Agitation-Calmness Evaluation Scale, or Buss-Perry Aggression Scale can be used. However, it can be said that the follow-up of signs and symptoms listed above still remains as the gold standard in daily practices of psychiatric wards (20-22).

The assaultive behavior of patients can take different forms such as screaming, swearing, shouting, biting, spitting, throwing objects, kicking, hitting or plain assault. The important thing is the evaluation of patient in early phases of agitation and procurement of required preventions. The threatening of others by the patients requires action and the rule is “rapid action” (14,23).

### **Approach to the Assaultive Patient**

Agitation is a cluster of vocal, verbal and/or motor behaviors that places security of the person, his relatives and/or the treatment team in danger, that prevents medical care and disrupts the person’s functioning. Agitation can be observed as several, de novo behaviors

that were absent in the normal behavioral repertoire of the person such as assaultiveness, violence, disruption or a normal behavior that is repeated abnormally such as repeated questions or pacing (24).

The first aim in approaching agitated patient is calming the patient rather than sedating him (25). A 4-step approach should be applied in treating aggressive patients involving environmental regulation, calming, physical restraint or isolation and pharmacological approach (16). Guidelines suggest that interventions other than pharmacological approach should be applied in the first step of interventions aiming to reduce agitation (26,27).

### **1. Environmental Regulation**

In the first step of confronting an agitated patient, safety of other patients and workers should be provided. Environmental variables such as comfort of the patient, removing patient's relatives, reducing the waiting period, behaviors of workers and level of stimulation can be monitored and those thought to play a role in assaultive behavior of the patient can be regulated. Removing external stimulations around the patient and provision of a quiet room are important. Laying the patient on a bed and providing a glass of water or juice can correct the situation.

Physicians or other workers should never stay alone in an unsafe area. All objects that are potentially harmful should be removed from the room. Those patients should be carefully monitored. A specified safety distance should be left in between the agitated patient and the worker. A prolonged or dense, direct gaze may be perceived by the patient as a threat. Placing hands behind may also be perceived as a directly confronting stance or threat. A calm stance should be displayed and control should be maintained. Any changes in the mood, speech and psycho-motor activity of the patient should be carefully monitored.

### **2. Calming**

The first method that should be used among verbal and non-verbal techniques aiming to reduce risk of

violent behavior should be verbal calming. The worker should make the patient feel that their aim is his wellness and safety and that they are in control of the situation. They should address the patient in a calm, controlled, non-provocative manner with a reassuring voice. They should stand leaving a distance of safety between them and the patient and be always ready to call the security personnel.

It should be kept in mind that agitation and most of the aggressive behaviors displayed by psychiatric patients arise without intentions of the patients and anger should not be displayed to the patient even if it is felt. Phrases such as "I understand that you feel not well and experience difficult times" or "you are suffering and you seem to be confused" can be used to show that you aim to understand the patient's experience. Phrases such as "You are here to receive help and we are trying to help you and solve your problem" or "please let us help and don't be afraid" can help relax the patient. Workers should accentuate the facts that the patient is in a safe environment and is under control and that harming himself or others will not be tolerated. The future consequences of his behavior should also be communicated in an appropriate language. Instead of behaving in a manner that will reflect and escalate aggression of the patient, suggesting that the patient talk with one of the workers or phone his relatives may help control the problem.

### **3. Isolation and Restraint**

Isolation and restraint is the last choice that can be used against dangerous behavior. Those methods should never be used for punishment, comfort of workers or instead of a treatment program and it should be kept in mind that the primary aim of all psychiatric treatments including inpatient hospitalization is to save and correct the honor of the person as a human as well as role in society and functioning. The rights, dignity and confidentiality of the patient should be shielded. The treatment team should evaluate the benefit of those methods in choices of using isolation or restraint and adequate and trained personnel should be used in those applications.

#### 4. Pharmacological Approach

Pharmacological treatment of the aggressive or agitated patient can be applied as the main treatment in some cases or in some cases can be used as an addition to calming and other methods. If dangerous behaviors persist despite all efforts, pharmacological treatment should be applied. If possible, the patient should be told of the type of treatment and its reasons. The ideal condition is voluntary acceptance of the drug by the patient. Oral application of drugs is important, especially for the patient to recover his control and dignity, in cases where that is not possible, parenteral application is used. Security personnel and other workers should be at hand if intra-muscular application is chosen. The onset of behavior, application of least restrictive methods, treatment applied and the final condition of the patient must be noted in detail.

The use of pharmacological agents in treating agitated patients started in the 1930s with the discovery of barbiturates and bromides. Approximately 20 years after the use of those drugs, difficulties such as development of tolerance/dependence/withdrawal, induction of liver enzymes, serious drug interactions and respiratory depression led to searches for newer agents. With the discovery of first, low-potency neuroleptics chlorpromazine started to play a significant role in treatment of agitated patients (26-28). But, the new treatment did not last much longer due to its effects such as orthostatic hypotension, confusion, anti-cholinergic toxicity and excessive sedation. It is suggested that use of chlorpromazine be avoided in presence of a better alternative (28-30).

High potency neuroleptics were discovered in short time and it was observed that they can control aggressive, disruptive and psychotic behaviors in agitated patients. It was thought for a while that higher doses of those agents would be more effective and this approach was called as "rapid neurolepticization". However, later studies demonstrated that this approach is false and risky (29). Actually, neuroleptic agents have some potential risks such as acute dystonic reactions and akathisia even when they are used in lowest effective doses and only once (30). Akathisia may

simulate agitation, confusing the patient and leading to repeated doses within a vicious cycle. Other, serious unwanted effects related with potent neuroleptics are hypotension, reduced threshold for seizures, cardiac rhythm disturbances and neuroleptic malignant syndrome and reports of their appearance even after a single dose in a lot of studies exist which should not be under-estimated (27,31-33).

This situation led to use of benzodiazepines first as monotherapy then as combined with high potency neuroleptics in treating agitated patients. Benzodiazepines have some advantages in treatment of agitated patients however, they also have specific unwanted effects such as respiratory depression, nausea, ataxia, disinhibition, tolerance, cognitive disturbance, excessive sedation and confusion (26). As a result, the last point in the acute agitation-classical antipsychotic debate is the question of better efficacy and advantage in sole or combined use of a potent neuroleptic and a benzodiazepine.

Haloperidol or lorazepam are used in isolation or combination in the traditional approach. The advantage of combining antipsychotic with benzodiazepine lies in reducing doses of either compared to their use in isolation and to combine the sedative effect of benzodiazepine with the behavioral control effect of antipsychotic (32). Haloperidol became a standard in rapid tranquilization due to its acceptable side effect profile, little sedation, less cardiovascular effects while being a potent antipsychotic. It was repeatedly shown to be effective and safe in controlling agitation in acute wards (31).

Studies reporting controversial results of using haloperidol and/or lorazepam also exist (34-38). Those results are difficult to discuss due to lack of elucidation relationship between reduced components of anxiety, agitation and/or aggression and reduced isolation and/or restraint. A more observable sign of efficacy for each of the drugs can be required, repeated injections to control aggression and according to this measure the combination of haloperidol-lorazepam is more effective than either drug in isolation (32,35,39). In a similar manner, droperidol was shown to be more effective compared to placebo or haloperidol. Patients receiving placebo or haloperidol require approximately three

times more repeated injections compared to patients receiving droperidol (40,41).

In contrast to lack of a study directly comparing droperidol with a combination of lorazepam-haloperidol, various, discrete studies evaluated their dosages and required, repeated injections (41). Depending on the results of those studies droperidol may emerge as a more effective drug in cases of urgency compared to placebo or haloperidol in adult psychiatric patients. When the differences in dosages and their applications are kept in mind, the difference in efficacies between droperidol and a combination of haloperidol-lorazepam is not currently clear. Classical, tablet forms of newer anti-psychotic agents are usually not used as first choices in agitation due to their slow titration schedules and lack of side effects limiting doses. However, agents with oral, liquid forms and quick dispersing tablets (risperidon, olanzapin) and those with intra-muscular forms (ziprasidon, risperidon, olanzapin) are becoming important choices in treating violent behavior in emergency wards. Those agents have risen to be first choices in various psychiatric disorders due to their better tolerability, studies illustrating the fact that transition from intra-muscular form to oral is easier, wider efficacy and safer side effect profiles (42-45).

Although acute agitation can arise due to almost all of the psychiatric disorders, it is widely neglected and viewed as a temporary state. Therefore, efforts to conduct studies, report their results and develop a standardized approach in treatment are not vigorous enough. However, for many psychiatric patients, those durations of increasing severity in their disorder form a stepping stone for novel treatments and psychopharmacological and psychological help received by patients in those acute situations predict their later treatments.

The lack of a standardized plan of treatment led the clinicians to move forward depending solely on their experiences and this, in turn led some clinicians to the belief that an agitated patient can not be managed without applying injection. Both worldwide and in our country, in lots of centers, the agitated patient is evaluated within the context of emergency wards and neuroleptized intramuscularly whether he is psychotic or not. Treatment choices lacking scientific support and

depending on clinical judgment not only leaves patients who are agitated due to a psychotic disorder under elevated risk of unwanted effects at this critical period their illnesses, it also delays onset of their treatment with atypical anti-psychotic agents that have better profiles of efficacy and adverse effects (46).

Yildiz (47) who reviewed studies focusing on classical and atypical antipsychotics, benzodiazepines and their combinations in treatment of acute agitation to address the need reported due to clinical limitations listed above, reported that the combination of a classical anti-psychotic such as haloperidol and a benzodiazepine such as lorazepam was more effective in controlling acute agitation when compared to either drug used in isolation. Also, it was observed that atypical antipsychotics display efficacy in acute agitation that is at least equal to the traditional approaches whether they are used alone or also in combination with a benzodiazepine. Among current atypical agents, risperidon, olanzapin and ziprasidon are the most suitable agents to use in management of acute agitation. Some of the studies report that oral formulations of some of the drugs are also effective in management of acute agitation. This may suggest that agitated patients are exposed to more injections than justified (46).

Despite the lack of clinical studies evaluating drugs for children and adolescents, emergency use of drugs to manage incidents of aggression in child and adolescent psychiatric wards is not rare. The standard application in emergency psychiatry is use of benzodiazepines and antipsychotics either alone or in combination (48). A retrospective study reported that psychotropic agents are used in approximately one thirds of incidents of aggression in a child and adolescent ward. The most commonly used agents in that study were thioridazine (68.1%), lorazepam (10.3%), chlorpromazine (9.6%) and haloperidol, diphenhydramine and benztropin (12% in total) (49).

As a result, when choosing drugs to use the final choice must be that of the team and both the physician and the patient should be made to feel comfortable as a result of this choice. Also, the chemical restraint should be applied after careful deliberation, guidance and documentation. Least restrictive alternatives should be used prior to psychopharmacological approach.

## REFERENCES

1. Drach-Zahavy A, Goldblatt H, Granot M, Hirschmann S, Kostintski H. Control: patients' aggression in psychiatric settings. *Qual Health Res* 2012; 2243-2253.
2. Flannery RB Jr. Psychiatric patient assaults and the staff victims: an introduction. *Psychiatr Q* 2010 Oct 14.
3. Hankin CS, Bronstone A, Koran LM. Agitation in the inpatient psychiatric setting: a review of clinical presentation, burden, and treatment. *J Psychiatr Pract* 2011; 17:170-185.
4. Erdos BZ, Hughes DH. Emergency psychiatry: a review of assaults by patients against staff at psychiatric emergency centers. *Psychiatr Serv* 2001; 52:1175-1177.
5. Anderson A, West SG. Violence against mental health professionals: when the treater becomes the victim. *Innov Clin Neurosci* 2011; 8:34-39.
6. Black KJ, Compton WM, Wetzel M, Minchin S, Farber NB, Rastogi-Cruz D. Assaults by patients on psychiatric residents at three training sites. *Hosp Community Psychiatry* 1994; 45:706-710.
7. Schwartz TL, Park TL. Assaults by patients on psychiatric residents: a survey and training recommendations. *Psychiatr Serv* 1999; 50:381-383.
8. May DD, Grubbs LM. The extent, nature and precipitating factors of nurse assault among three groups of registered nurses in a regional medical center. *J Emerg Nurs* 2002; 28:11-17.
9. Presley D, Robinson G. Violence in the emergency department: nurses contend with prevention in the healthcare arena. *Nurs Clin North Am* 2002; 37:161-169.
10. Moylan LB, Cullinan M. Frequency of assault and severity of injury of psychiatric nurses in relation to the nurses' decision to restrain. *J Psychiatr Ment Health Nurs* 2011; 18:526-534.
11. Flannery RB Jr, LeVitre V, Rego S, Walker AP. Characteristics of staff victims of psychiatric patient assaults: 20-year analysis of the Assaulted Staff Action Program. *Psychiatr Q* 2011; 82:11-21.
12. Fernandes CM, Raboud JM, Christenson JM, Bouthillette F, Bullock L, Ouellet L, Moore CF. Violence in the Emergency Department Study (VITES) Group. The effect of an education program on violence in the emergency department. *Ann Emerg Med* 2002; 39:47-55.
13. Lanza ML, Schmidt S, McMillan F, Demaio J, Forester L. Support Our Staff - a unique program to help deal with patient assault. *Perspect Psychiatr Care* 2011; 47:131-137.
14. Hill S, Petit J. The violent patient. *Emerg Med Clin North Am* 2000; 18:301-315.
15. Reid WH. Assaults against psychiatrists and other mental health professionals. *J Psychiatr Pract* 2008; 14:179-181.
16. Petit JR. Management of the acutely violent patient. *Psychiatr Clin North Am* 2005; 28:701-711.
17. Flannery RB Jr, Farley E, Tierney T, Walker AP. Characteristics of assaultive psychiatric patients: 20-year analysis of the Assaultive Staff Action Program (ASAP). *Psychiatr Q* 2011;82:1-10.
18. Miller JD, Zeichner A, Wilson LF. Personality correlates of aggression: evidence from measures of the five-factor model, UPPS model of impulsivity, and BIS/BAS. *J Interpers Violence* 2012; 27:2903-2919.
19. Tuvblad C, Baker LA. Human aggression across the lifespan: genetic propensities and environmental moderators. *Adv Genet* 2011; 75:171-214.
20. Battaglia J, Lindborg SR, Alaka K, Meehan K, Wright P. Calming versus sedative effects of intramuscular olanzapine in agitated patients. *Am J Emerg Med* 2003; 21:192-198.
21. Kostakoğlu E, Batur S, Tiryaki A, Göğüş A. Pozitif ve Negatif Sendrom Ölçeği'nin (PANSS) Türkçe uyarlamasının geçerlilik ve güvenilirliği. *Türk Psikoloji Dergisi* 1999; 14:23-32 (Article in Turkish).
22. Evren C, Çınar Ö, Güleç H, Çelik S, Evren B. The validity and reliability of the Turkish version of the Buss-Perry's Aggression Questionnaire in male substance dependent inpatients. *Düşünen Adam: The Journal of Psychiatry and Neurological Sciences* 2011; 24:283-295.
23. Tardiff K. Management of the violent patient in an emergency situation. *Psychiatr Clin North Am* 1988; 11:539-549.
24. Verma SD, Davidoff DA, Kambhampati KK. Management of the agitated elderly patient in the nursing home: the role of the atypical antipsychotics. *J Clin Psychiatry* 1998; 59:50-55.
25. Nordstrom K, Allen MH. Managing the acutely agitated and psychotic patient. *CNS Spectr* 2007; 12:5-11.
26. Allen MH, Currier GW, Carpenter D, Ross RW, Docherty JP. Expert Consensus Panel for behavioral emergencies 2005. The expert consensus guideline series. Treatment of behavioral emergencies 2005. *J Psychiatr Pract* 2005; 11 (Suppl. 1): 5-108.
27. National Institute for Health and Clinical Excellence. Violence: the short-term management of disturbed/violent behaviour in in-patient psychiatric settings and emergency departments. London: Royal College of Nursing, 2006.
28. Salzman C, Green AI, Rodriguez-Villa F, Jaskiw GI. Benzodiazepines combined with neuroleptics for management of severe disruptive behavior. *Psychosomatics* 1986; 27:17-22.

29. Levy RH. Sedation in acute and chronic agitation. *Pharmacotherapy* 1996; 16:152-159.
30. Ahmed U, Jones H, Adams CE. Chlorpromazine for psychosis induced aggression or agitation. *Cochrane Database Syst Rev* 2010; CD007445.
31. Neborsky R, Janowsky D, Munson E, Depry D. Rapid treatment of acute psychotic symptoms with high- and low-dose haloperidol. Behavioral considerations. *Arch Gen Psychiatry* 1981; 38:195-199.
32. Foster S, Kessel J, Berman ME, Simpson GM. Efficacy of lorazepam and haloperidol for rapid tranquilization in a psychiatric emergency room setting. *Int Clin Psychopharmacol* 1997; 12:175-179.
33. Modestin J, Krapf R, Böker W. A fatality during haloperidol treatment: mechanism of sudden death. *Am J Psychiatry* 1981; 138:1616-1617.
34. Konikoff F, Kuritzky A, Jerushalmi Y, Theodor E. Neuroleptic malignant syndrome induced by a single injection of haloperidol. *Br Med J (Clin Res Ed)* 1984; 289:1228-1229.
35. Currier GW, Trenton A. Pharmacological treatment of psychotic agitation. *CNS Drugs* 2002; 16:219-228.
36. Donlon PT, Hopkin J, Tupin JP. Overview: Efficacy and safety of the rapid neuroleptization method with injectable haloperidol. *Am J Psychiatry* 1979; 136:273-278.
37. Battaglia J, Moss S, Rush J, Kang J, Mendoza R, Leedom L, Dubin W, McGlynn C, Goodman L. Haloperidol, lorazepam, or both for psychotic agitation? A multicenter, prospective, double-blind, emergency department study. *Am J Emerg Med* 1997; 15:335-340.
38. Salzman C, Solomon D, Miyawaki E, Glassman R, Rood L, Flowers E, Thayer S. Parenteral lorazepam versus parenteral haloperidol for the control of psychotic disruptive behavior. *J Clin Psychiatry* 1991; 52:177-180.
39. Bieniek SA, Ownby RL, Penalver A, Dominguez RA. A double-blind study of lorazepam versus the combination of haloperidol and lorazepam in managing agitation. *Pharmacotherapy* 1998; 18:57-62.
40. van Leeuwen AM, Molders J, Sterkmans P, Mielants P, Martens C, Toussaint C, Hovent AM, Desseilles MF, Koch H, Devroye A, Parent M. Droperidol in acutely agitated patients. A double-blind placebo-controlled study. *J Nerv Ment Dis* 1977; 164:280-283.
41. Resnick M, Burton BT. Droperidol vs. haloperidol in the initial management of acutely agitated patients. *J Clin Psychiatry* 1984; 45:298-299.
42. Currier GW. Atypical antipsychotic medications in the psychiatric emergency service. *J Clin Psychiatry* 2000; 61(Suppl.14):21-26.
43. Daniel DG, Potkin SG, Reeves KR, Swift RH, Harrigan EP. Intramuscular (IM) ziprasidone 20 mg is effective in reducing acute agitation associated with psychosis: a double-blind, randomized trial. *Psychopharmacology (Berl)* 2001; 155:128-134.
44. Kinon BJ, Roychowdhury SM, Milton DR, Hill AL. Effective resolution with olanzapine of acute presentation of behavioral agitation and positive psychotic symptoms in schizophrenia. *J Clin Psychiatry* 2001; 62(Suppl.2):17-21.
45. Lesem MD, Zajecka JM, Swift RH, Reeves KR, Harrigan EP. Intramuscular ziprasidone, 2 mg versus 10 mg, in the short-term management of agitated psychotic patients. *J Clin Psychiatry* 2001; 62:12-18.
46. Feifel D. Rationale and guidelines for the inpatient treatment of acute psychosis. *J Clin Psychiatry* 2000; 61(Suppl.14):27-32.
47. Yıldız A. Akut ajitasyon sağaltımında benzodiazepinlerin, tipik ve atipik antipsikotiklerin yeri: Bulguların gözden geçirilmesi. [Benzodiazepines, typical and atypical antipsychotics in the management of acute agitation: A review]. *Türk Psikiyatri Derg* 2003; 14:134-144 (Article in Turkish).
48. Adimando AJ, Poncin YB, Baum CR. Pharmacological management of the agitated pediatric patient. *Pediatr Emerg Care* 2010; 26:856-860.
49. Garrison WT, Ecker B, Friedman M, Davidoff R, Haeberle K, Wagner M. Aggression and counteraggression during child psychiatric hospitalization. *J Am Acad Child Adolesc Psychiatry* 1990; 29:242-250.