## CHAPTER 287

## **Acute Agitation**

Michael Wilson

## **REFERENCES**

- 1. Sachs GS: A review of agitation in mental illness: burden of illness and underlying pathology. J Clin Psychiatry 67(Suppl 10): 5, 2006. [PMID: 16965190]
- Zeller SL, Holloman GH, Wilson MP: Management of agitation. In: Tasman A, Lieberman J, Kay J, First M, Riba M, eds. *Psychiatry*, 4th ed. Oxford, United Kingdom: Wiley Publishing; 2014.
- Zeller SL, Nordstrom KD, Wilson MP: The Diagnosis and Management of Agitation. Cambridge, United Kingdom: Cambridge University Press; 2017.
- Wilson MP, Vilke GM: Mental illness and substance abuse. In: Cooney D, ed. EMS Medicine. New York, NY: McGraw-Hill; 2015.
- Wilson MP, Pepper D, Currier GW, Holloman GH Jr, Feifel D: The psychopharmacology of agitation: consensus statement of the American Association for Emergency Psychiatry Project BETA Psychopharmacology Workgroup. West J Emerg Med 13: 26, 2012. [PMID: 22461918]
- Holloman GH Jr, Zeller SL: Overview of Project BETA: best practices in evaluation and treatment of agitation. West J Emerg Med 13: 1, 2012. [PMID: 22461914]
- Allen MH, Currier GW, Carpenter D, et al: The expert consensus guideline series. Treatment of behavioral emergencies 2005. J Psychiatr Pract 11(suppl 1): 5, 2005. [PMID: 16319571]
- Garriga M, Pacchiarotti I, Kasper S, et al: Assessment and management of agitation in psychiatry: expert consensus. World J Biol Psychiatry 17: 86, 2016. [PMID: 26912127]
- Nordstrom K, Zun LS, Wilson MP, et al: Medical evaluation and triage of the agitated patient: consensus statement of the American Association for Emergency Psychiatry Project BETA Medical Evaluation Workgroup. West J Emerg Med 13: 3, 2012. [PMID: 22461915]
- Anderson EL, Nordstrom K, Wilson MP, et al. American Association for Emergency Psychiatry Task Force on Medical Clearance of Adults Part I: introduction, review and evidence-based guidelines. West J Emerg Med 18: 235, 2017. [PMID: 28210358]
- Wilson MP, Nordstrom K, Anderson EL, et al. American Association for Emergency Psychiatry Task Force on Medical Clearance of Adult Psychiatric Patients. Part II: controversies over medical assessment, and consensus recommendations. West J Emerg Med 18: 640, 2017. [PMID: 28611885]
- 12. https://www.ena.org/practice-research/research/Documents/ENAEDVSReport November2011.pdf. (Emergency Nurses Association, Institute for Emergency Nursing Research: Emergency department violence surveillance study. 2011.) Accessed February 2, 2016.
- Kansagra SM, Rao SR, Sullivan AF, et al. A survey of workplace violence across 65 U.S. emergency departments. Acad Emerg Med 15: 1268, 2008. [PMID: 18976337]
- Pane GA, Winiarski AM, Salness KA: Aggression directed toward emergency department staff at a university teaching hospital. Ann Emerg Med 20: 283, 1991. [PMID: 1996823]
- Zeller SL, Rhoades RW: Systematic reviews of assessment measures and pharmacologic treatments for agitation. Clin Ther 32: 403, 2010. [PMID: 20399981]
- Calow N, Lewis A, Showen S, et al: Literature synthesis: patient aggression risk assessment tools in the emergency department. J Emerg Nursing 42: 19, 2016. [PMID: 25817006]
- Calver LA, Stokes B, Isbister GK: Sedation assessment tool to score acute behavioural disturbance in the emergency department. *Emerg Med Australas* 23: 732, 2011. [PMID: 22151672]
- Elbogen EB, Johnson SC: The intricate link between violence and mental disorder: results from the National Epidemiologic Survey on alcohol and related conditions. Arch Gen Psychiatry 66: 152, 2009. [PMID: 19188537]
- Douglas KS, Ogloff JRP, Nicholls TL: Assessing risk for violence among psychiatric patients: the HCR-20 violence risk assessment scheme and the psychopahty checklist screening version. J Consult Clin Psychol 67: 917, 1999. [PMID: 10596513]
- Vilke GM, Wilson MP: Agitation: what every emergency physician should know. Emerg Med Rep 30: 233, 2009.
- Pepper D, Wilson MP: The ethics of agitation: when is an agitated patient decisionally capable? In: Zeller SL, Nordstrom K, Wilson MP, eds. The Diagnosis and Management of Agitation. Cambridge, United Kingdom: Cambridge University Press; 2017.
- Campillo A, Castillo E, Vilke GM, Hopper A, Ryan V, Wilson MP: First-generation antipsychotics are often prescribed in the emergency department but are often not administered with adjunctive medications. *J Emerg Med* 49: 901, 2015. [PMID: 26433424]
- Wilson MP, Minassian A, Bahramzi M, Campillo A, Vilke GM: Despite expert recommendations, second-generation antipsychotics are not often prescribed in the emergency department. J Emerg Med 46: 808, 2014. [PMID: 24656982]
- Ostinelli EG, Brooke-Powney MJ, Li X, Adams CE: Haloperidol for psychosis-induced aggression or agitation (rapid tranquillisation). Cochrane Database Syst Rev 7: CD009377, 2017.
  [PMID: 28758203]
- Powney MJ, Adams CE, Jones H: Haloperidol for psychosis-induced aggression or agitation (rapid tranquillisation). Cochrane Database Syst Rev 11: CD009377, 2012. [PMID: 23152276]

- 26. https://pathways.nice.org.uk/pathways/violence-and-aggression#path=view%3A/pathways/violence-and-aggression/restrictive-interventions-for-managing-violence-and-aggression-in-adults.xml&content=view-node%3Anodes-rapid-tranquillisation. (National Institute for Health and Care Excellence: Restrictive interventions for managing violence and aggression in adults 2015.) Accessed January 21, 2018.
- Calver L, Page CB, Downes MA, et al. The safety and effectiveness of droperidol for sedation of acute behavioral disturbance in the emergency department. Ann Emerg Med 66: 230, 2015. [PMID: 25890395]
- Chan EW, Taylor DM, Knott JC, Phillips GA, Castle DJ, Kong DC: Intravenous droperidol or olanzapine as an adjunct to midazolam for the acutely agitated patient: a multicenter, randomized, double-blind, placebo-controlled clinical trial. *Ann Emerg Med* 61: 72, 2013. [PMID: 22981685]
- Jackson CW, Sheehan AH, Reddan JG: Evidence-based review of the black-box warning for droperidol. Am J Health Syst Pharm 64: 1174, 2007. [PMID: 17519460]
- Richards JR, Schneir AB: Droperidol in the emergency department: is it safe? J Emerg Med 24: 44, 1 2003. [PMID: 12745049]
- Martel M, Sterzinger A, Miner J, Clinton J, Biros M: Management of acute undifferentiated agitation in the emergency department: a randomized double-blind trial of droperidol, ziprasidone, and midazolam. *Acad Emerg Med* 12: 1167, 2005. [PMID: 16282517]
- Currier GW, Trenton A: Pharmacologic treatment of psychotic agitation. CNS Drugs 16: 219, 2002. [PMID: 11945106]
- Green SM, Roback MG, Krauss B, et al: Predictors of airway and respiratory adverse events with ketamine sedation in the emergency department: an individual-patient data meta-analysis of 8,282 children. Ann Emerg Med 54: 158, 2009. [PMID: 19201064]
- 34. Vilke GM, Bozeman WP, Dawes DM, Demers G, Wilson MP: Excited delirium syndrome (ExDS): treatment options and considerations. *J Forensic Leg Med* 19: 117, 2012. [PMID: 22390995]
- Vilke GM, DeBard ML, Chan TC, et al. Excited delirium syndrome (ExDS): defining based on a review of the literature. J Emerg Med 43: 897, 2012. [PMID: 21440403]
- Isbister GK, Calver LA, Downes MA, Page CB: Ketamine as rescue treatment for difficultto-sedate severe acute behavioral disturbance in the emergency department. Ann Emerg Med 67: 581, 2016. [PMID: 26899459]
- 37. American College of Emergency Physicians Clinical Policies Subcommittee on the Adult Psychiatric Patient, Nazarian DJ, Broder JS, et al: Clinical policy: critical issues in the diagnosis and management of the adult psychiatric patient in the emergency department. 

  Ann Emerg Med 69: 480, 2017. [PMID: 28335913]
- Cole JB, Moore JC, Nystrom PC, et al: A prospective study of ketamine versus haloperidol for severe prehospital agitation. Clin Toxicol (Phila) 54: 556, 2016. [PMID: 27102743]
- Burnett AM, Peterson BK, Stellpflug SJ, et al: The association between ketamine given for prehospital chemical restraint with intubation and hospital admission. Am J Emerg Med 33: 76, 2015. [PMID: 25455046]
- Burnett AM, Salzman JG, Griffith KR, Kroeger B, Frascone RJ: The emergency department experience with prehospital ketamine: a case series of 13 patients. *Prehosp Emerg Care* 16: 553, 2012. [PMID: 22809253]
- Hick JL, Ho JD: Ketamine chemical restraint to facilitate rescue of a combative "jumper." *Prehosp Emerg Care* 9: 85, 2005. [PMID: 16036834]
- Hopper AB, Vilke GM, Castillo EM, Campillo A, Davie T, Wilson MP: Ketamine use for acute agitation in the emergency department. J Emerg Med 48: 712, 2015. [PMID: 25843924]
- Lahti AC, Koffel B, LaPorte D, Tamminga CA: Subanesthetic doses of ketamine stimulate psychosis in schizophrenia. Neuropsychopharmacology 13: 9, 1995. [PMID: 8526975]
- Klein LR, Driver BE, Miner JR et al. Intramuscular midazolam, olanzapine, ziprasidone, or haloperidol for treating acute agitation in the emergency department. Ann Emerg Med 2018;72:374-385. [PMID: 29885904]
- 45. Zeller SL, Wilson MP: Acute treatment of agitation in schizophrenia. *Drug Discov Today* 8: 25, 2011
- Reilly TH, Kirk MA: Atypical antipsychotics and newer antidepressants. Emerg Med Clin North Am 25: 477, 2007. [PMID: 17482029]
- Raveendran NS, Tharyan P, Alexander J, Adams CE: Rapid tranquillisation in psychiatric emergency settings in India: pragmatic randomised controlled trial of intramuscular olanzapine versus intramuscular haloperidol plus promethazine. *BMJ* 335: 865, 2007. [PMID: 17954514]
- 48. https://www.nice.org.uk/guidance/qs154/resources/violent-and-aggressive-behaviours-in-people-with-mental-health-problems-pdf-75545539974853. (National Institute for Health and Care Excellence: Violent and aggressive behaviours in people with mental health problems 2017.) Accessed January 21, 2018.
- Richmond JS, Berlin JS, Fishkind AB, et al: Verbal de-escalation of the agitated patient: consensus statement of the American Association for Emergency Psychiatry Project BETA De-escalation Workgroup. West J Emerg Med 13: 17, 2012. [PMID: 22461917]
- Cohen-Mansfield J, Werner P: Management of verbally disruptive behaviors in nursing home residents. J Gerontol A Biol Sci Med Sci 52: M369, 1997. [PMID: 9402944]
- Isbister GK, Calver LA, Page CB, Stokes B, Bryant JL, Downes MA: Randomized controlled trial of intramuscular droperidol versus midazolam for violence and acute behavioral disturbance: the DORM study. Ann Emerg Med 56: 392, 2010. [PMID: 20868907]
- Annas GJ: The last resort: the use of physical restraints in medical emergencies. N Engl J Med 341: 1408, 1999. [PMID: 10536135]
- 53. Wilson MP, Sloane C: Chemical restraints, physical restraints, and other demonstrations of force. In: Jesus J, Rosen P, Adams J, Derse A, Wolfe R, Grossman S, eds. Ethical Problems in Emergency Medicine: A Discussion-Based Review. Oxford, United Kingdom: Wiley-Blackwell. 2012
- https://www.acep.org/Clinical-Practice-Management/Use-of-Patient-Restraints/#sm .00000v1l0nhan5dzaygnycul99ery. (American College of Emergency Physicians: Policy on use of patient restraints.) Accessed November 6, 2017.

- 55. Zun LS: Pitfalls in the care of the psychiatric patient in the emergency department. J Emerg Med 43: 829, 2012. [PMID: 22698827]
- Knox DK, Holloman GH: Use and avoidance of seclusion and restraint: consensus statement of the American Association for Emergency Psychiatry Project BETA seclusion and restraint workgroup. West J Emerg Med 13: 35, 2012. [PMID: 22461919]
- Tueth MJ: Management of behavioral emergencies. Am J Emerg Med 13: 344, 1995.
   [PMID: 7755834]
- Currier GW, Walsh P, Lawrence DT: Physical restraints in the emergency department and attendance at subsequent outpatient psychiatric treatment. J Psychiatr Pract 17: 387, 2011.
   [PMID: 22108395]
- Weiss AP, Chang G, Rauch SL, et al: Patient- and practice-related determinants of emergency department length of stay for patients with psychiatric illness. *Ann Emerg Med* 60: 162, 2012. [PMID: 22555337]
- 60. Wilson MP, Nordstrom K, Shah AA, Vilke GM: Psychiatric emergencies in pregnant women. Emerg Med Clin North Am 33: 841, 2015. [PMID: 26493527]
- Blanda MP: Pharmacologic issues in geriatric emergency medicine. Emerg Med Clin North Am 24: 449, 2006. [PMID: 16584966]
- 62. American Geriatrics Society: American Geriatrics Society 2015 Updated Beers Criteria for potentially inappropriate medication use in older adults. *J Am Geriatr Soc* 63: 2227, 2015. [PMID: 26446832]
- 63. Gerson R, Malas N, Feuer V et al. Best Practices for Evaluation and Treatment of Agitated Children and adolescents (BETA) in the Emergency Department: consensus Statement of the American Association for Emergency Psychiatry. West J Med in press.

- 64. Calver L, Isbister GK: Parenteral sedation of elderly patients with acute behavioral disturbance in the ED. *Am J Emerg Med* 31: 970, 2013. [PMID: 23685060]
- Cohen-Mansfield J, Dakheel-Ali M, Marx MS: Engagement in persons with dementia: the concept and its measurement. Am J Geriatr Psychiatry 17: 299, 2009. [PMID: 19307858]
- 66. Kohen I, Preval H, Southard R, Francis A: Naturalistic study of intramuscular ziprasidone versus conventional agents in agitated elderly patients: retrospective findings from a psychiatric emergency service. Am J Geriatr Pharmacother 3: 240, 2005. [PMID: 16503319]
- 67. Clegg A, Young JB: Which medications to avoid in people at risk of delirium: a systematic review. *Age Ageing* 40: 23, 2011. [PMID: 21068014]
- Piechniczek-Buczek J: Psychiatric emergencies in the elderly population. Emerg Med Clin North Am 24: 467, 2006. [PMID: 16584967]
- 69. Shenvi C, Kennedy M, Wilson MP, et al Confusion and agitation in the elderly ED patient' 2018; https://www.acep.org/patient-care/adept/. Accessed Feb 20, 2019.
- Shenvi C, Wilson MP, Aldai A, et al 'A research agenda for the assessment and management of acute behavioral changes in elderly emergency department patients. West J Emerg Med in press.
- Lonergan E, Britton AM, Luxenberg J, Wyller T: Antipsychotics for delirium. Cochrane Database Syst Rev 2: CD005594, 2007. [PMID: 17443602]