#CHAIR2017

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neuroscience CME

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Tackling the Challenge of Aggression in Psychiatric Patients

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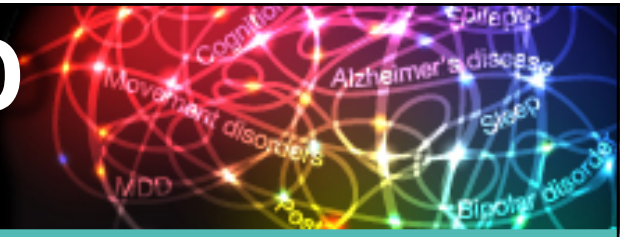
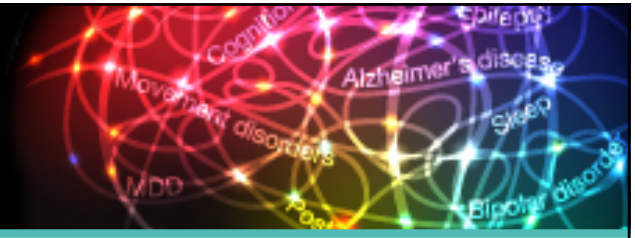
Disclosures



- Dr. Thompson has nothing to disclose.

Learning Objective 1

Examine best practice for the management of aggression in psychiatric patients.



This presentation will include the off-label discussion of agents for the management of aggression.

Currently, there are no FDA-approved agents specifically for the management of aggression.

Approaches to Risk Assessment

- Actuarial decision-making:
  - Risk scales (e.g., Violence Risk Appraisal Guide (VRAG)
  - Psychological tests (e.g., Psychopathology Checklist–Revised (PCL-R)
- Clinical judgement
  - History and physical
  - Presenting symptoms
  - Incident reports
- Structured professional judgement
  - (e.g., Historical Clinical Risk Assessment-20 (HCR-20)

Modified Overt Aggression Scale (MOAS)

Verbal aggression

_____ **0** No verbal Aggression
_____ **1** Shouts angrily, curses mildly, or makes personal insults
_____ **2** Curses viciously, is severely insulting, has temper outbursts
_____ **3** Impulsively threatens violence toward others or self
_____ **4** Threatens violence toward others or self repeatedly or deliberately
_____ **SUM VERBAL AGGRESSION SCORE**

Aggression against Property

_____ **0** No aggression against property
_____ **1** Slams door, rips clothing, urinates on floor
_____ **2** Throws objects down, kicks furniture, defaces walls
_____ **3** Breaks objects, smashes windows
_____ **4** Sets fires, throws objects dangerously
_____ **SUM PROPERTY AGGRESSION SCORE**

Autoaggression

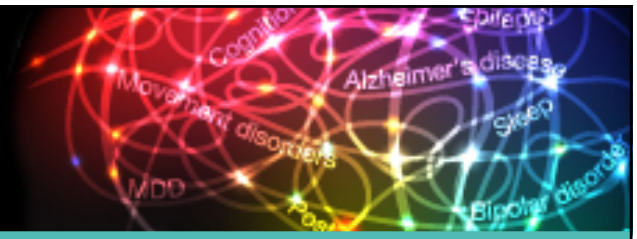
_____ **0** No autoaggression
_____ **1** Picks or scratches skin, pulls hair out, hits self (without injury)
_____ **2** Bangs head, hits fists into walls, throws self onto floor
_____ **3** Inflicts minor cuts, bruises, burns, or welts on self
_____ **4** Inflicts major injury on self or makes a suicide attempt
_____ **SUM AUTOAGGRESSION SCORE**

Physical Aggression

_____ **0** No physical aggression
_____ **1** Makes menacing gestures, swings at people, grabs at clothing
_____ **2** Strikes, pushes, scratches, pulls hair of others (without injury)
_____ **3** Attacks others, causing mild injury (bruises, sprain, welts, etc.)
_____ **4** Attacks others, causing serious injury
_____ **SUM PHYSICAL AGGRESSION SCORE**

Kay SR, et al. *J Nerv Ment Dis*. 1988;176:539-546.

Historical Clinical Risk Assessment-20 (HCR-20)



- Developed to help structured decisions about violence risk
- Aims to facilitate strategies for reducing risk
- Consists of 20 items related to violent behavior
- Most common applications are within correctional, forensic, and general of civil psychiatric settings
- Applicable to individuals ≥ 18

Douglas KS, et al. *Assessing Risk of Violence – User Guide*. 2013; Douglas KS, et al. 2014; Int J Forensic Mental Health. 2014;(32):93-108; Douglas KS. *Behav Sci Law*. 2014;32(5):557-576.

HCR-20

HISTORICAL FACTORS	CLINICAL FACTORS	RISK MANAGEMENT FACTORS
History of Problems with…	*Recent Problems with…*	*Future problems with…*
H1 Violence	C1 Insight	R1 Professional services
H2 Other Antisocial Behaviour	C2 Violent ideation or intent	R2 Living situation
H3 Relationship	C3 Symptoms of major mental disorder	R3 Personal support
H4 Employment	C4 Instability	R4 Treatment/ supervision response
H5 Substance use	C5 Treatment/ Supervision response	R5 Stress or coping
H6 Major mental disorder		
H7 Personality disorder		
H8 Traumatic Experiences		
H9 Violent Attitudes		
H10 Treatment/ Supervision response		

Douglas KS, et al. *Assessing Risk of Violence – User Guide*. 2013; Douglas KS, et al. 2014; Int J Forensic Mental Health. 2014;(32):93-108; Douglas KS. *Behav Sci Law*. 2014;32(5):557-576.

General Principles for the Management of Aggression

- Maintenance of patient safety, dignity, and autonomy
- De-escalation techniques
- Considerations for restraint or seclusion
- Medications
  - Treatment selection for acute/emergency vs long-term management
  - Oral vs depot treatments
- Patient and family education

Joint Commission Key Standards on Restraint and Seclusion

JC Standard	JC Element of Performance
Standard PC.03.05.01: The [organization] uses restraint or seclusion only when it can be clinically justified or when warranted by patient behavior that threatens the physical safety of the patient, staff, or others.	**1.** The hospital uses restraint or seclusion only to protect the immediate physical safety of the patient, staff, or others. **2.** The hospital does not use restraint or seclusion as a means of coercion, discipline, convenience, or staff retaliation. **3**. The hospital uses restraint or seclusion only when less restrictive interventions are ineffective. **4**. The hospital uses the least restrictive form of restraint or seclusion that protects the physical safety of the patient, staff, or others. **5.** The hospital discontinues restraint or seclusion at the earliest possible time, regardless of the scheduled expiration of the order.
Standard PC.03.05.07: The [organization] monitors patients who are restrained or secluded.	Physicians or other licensed independent practitioners or staff who have been trained in accordance with 42 CFR 482.13(f) monitor the condition of patients in restraint or seclusion.
Standard PC.03.05.11: The [organization] evaluates and reevaluates the patient who is restrained or secluded.	A physician or other licensed independent practitioner responsible for the care of the patient evaluates the patient in-person within one hour of the initiation of restraint or seclusion used for the management of violent or self-destructive behavior that jeopardizes the physical safety of the patient, staff, or others.

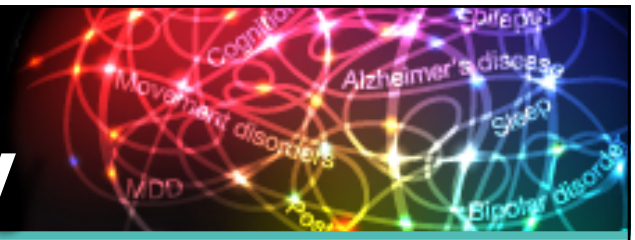
Joint Commission Standards on Restraint and Seclusion. Available at https://www.crisisprevention.com/CPI/media/Media/Resources/alignments/Joint-Commission-Restraint-Seclusion-Alignment-2011.pdf.

CMS Guidance on Restraint and Seclusion (482.13e)

- Use of restraint or seclusion not driven by diagnosis, but by a comprehensive individual patient assessment
  - used to determine whether the use of less restrictive measures poses a greater risk than the risk of using a restraint or seclusion
  - should include a physical assessment to identify medical problems that may be causing behavior changes in the patient.
- Staff must assess and monitor patient's condition on an ongoing basis
  - Restraint or seclusion may only be employed while the unsafe situation continues
  - When unsafe condition ends, restraint or seclusion should be discontinued
  - Decision to discontinue based on need for restraint or seclusion no longer present or patient needs can be addressed using less restrictive methods

CMS website. Available at https://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/downloads/R37SOMA.pdf.

Medication for Aggression Long-Term and Emergency



- Long-Term
  - Anticonvulsants
  - Beta blockers
  - Lithium
  - Typical antipsychotics
  - Atypical antipsychotics
  - Antidepressants
- Emergency
  - Benzodiazepines
  - Typical antipsychotics
  - Atypical antipsychotics

Gurnani T, et al. *J Child Adolesc Psychopharmacol*. 2016;26(1):65-73; SAMSHA. *Interventions for Disruptive Behavior Disorders: Medication Management*. 2011; Goedhard LE, et al. *J Clin Psychiatry*. 2006;67(7):1013-1024.

Efficacy of Anticonvulsants in the Management of Aggression

- Meta-analysis of 14 placebo-controlled clinical trials with a total of 672 participants
- Results:
  - Sodium valproate/divalproex superior to placebo for:
    - outpatient men with recurrent impulsive aggression
    - Impulsively aggressive adults
    - Youths with conduct disorder
  - Carbamazepine superior to placebo in reducing self-directed aggression in women with borderline personality disorder
  - Oxcarbazepine superior to placebo for verbal aggression and aggression against objects in adult outpatients
  - Phenytoin superior to placebo on frequency of aggressive acts in male prisoners and outpatient men with personality disorders

Huband N, et al. *Cochrane Database Syst Rev*. 2010;17(2):CD003499.

Efficacy of Beta Blockers in the Management of Aggression

Agent	Patient Sample	Result
Pindolol[1]	30 male inpatients with schizophrenia involved in ≥ 4 aggressive incidents	Scores on Overt Aggression Scale (OAS) were significantly reduced for number aggressive incidents ($p < .02$) and severity of incidents ($p < .0001$) with pindolol
Nadolol[2]	34 male acutely aggressive patients with schizophrenia	After first week of treatment, patients taking nadolol showed significant improved compared to placebo; no separation between nadolol and placebo at 2 weeks
Propranolol[3]	6 RCTs of patients with acquired brain injury	2 RCTs found propranolol to be effective in managing aggression and agitation

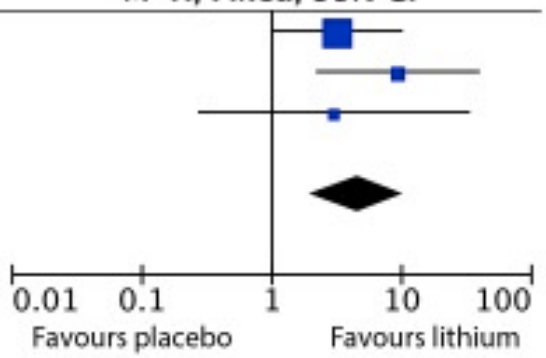
1. Casper N, et al. *Int Clin Psychopharmaol*. 2001;16(2):111-115; 2. Allan ER, et al. *J Clin Psychiatry*. 1996;57(10):455-459. 3. Fleminger S, et al. *Cochrance Database Syst Rev*. 2006;Oct 18;(4):CD003299.

Efficacy of Lithium in Managing Aggression in Youths with Conduct Disorder

Study or subgroup	Lithium Events	Lithium Total	Placebo Events	Placebo Total	Weight	OR M-H, Fixed, 95% CI
Campbell et al [26]	17	25	10	25	61.0%	3.19 [1.00, 10.17]
Malone et al [25]	16	20	6	20	22.9%	9.33 [2.18, 39.96]
Rifkin et al [24]	3	14	1	12	16.1%	3.00 [0.27, 33.49]
Total (95% CI)		**59**		**57**	**100.0%**	**4.56 [1.97, 10.56]**
Total events	36		17			

Heterogeneity: $X^2 = 1.41$, $df = 2$ ($P = 0.49$); $I^2 = 0\%$

Test for overall effect, $z = 3.55$ ($P < 0.001$)



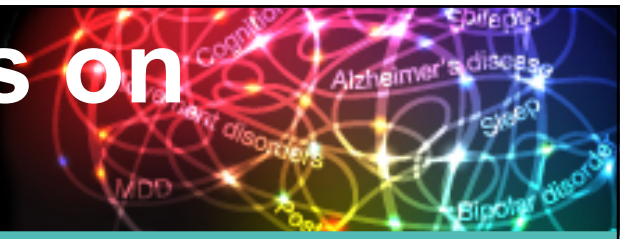
Pringsheim T, et al. *Can J Psychiatry*. 2015;60(2):52-61.

Efficacy of Antipsychotics in the Management of Aggression

Agent	Patient Sample	Result
Clozapine[1]	137 aggressive patients with schizophrenia	Over 12 month period, clozapine reduced the use of restraints ($p < .032$) and seclusion ($p < .001$)
Olanzapine[2]	498 patients with first-episode schizophrenia, schizoaffective disorder, or schizophreniform disorder	Olanzapine significantly superior to haloperidol, quetiapine, and amisulpride in reducing hostility after 1 and 3 months
Aripiprazole (intramuscular, IM)[3]	357 patients with acute agitation with schizophrenia, schizoaffective disorder, or schizophreniform disorder	9.75 mg IM aripiprazole compared to placebo reduced agitation within 45 minutes; IM haloperidol did not separate from placebo until 105 minutes
Risperidone[4]	157 treatment-resistant hospitalized patients with schizophrenia or schizoaffective disorder	Risperidone and olanzapine effective in patients with mild aggressive symptoms; whereas clozapine effective with strong aggressive symptoms

1. Chengappa KN, et al. *Schizophr Res*. 2002;53(1-2):1-6; 2. Volavka J, et al. *J Clin Psychiatry*. 2011;72(7):955-961; 3. Tran-Johnson TK, et al. *J Clin Psychiatry*. 2007;68(1):111-119; 4. Volavka J, et al. *J Clin Psychopharmacol*. 24(2):225-228.

Efficacy of Antidepressants on Aggression



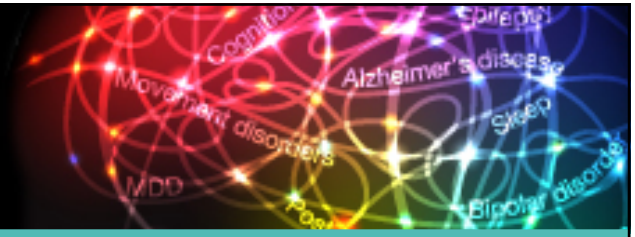
Agent	Patient Sample	Result
Fluvoxamine[1]	38 patients with borderline personality disorders	Significant improvement only on mood shifts
Paroxetine[2]	12 males with criminal records	Decreased aggressive and impulsive responding
Citalopram[3]	186 patients with Alzheimer's disease and clinically significant agitation	Citalopram was more effective in patients with mild agitation and little cognitive impairment

Rhinne T, et al. *Am J Psychiatry*. 2002;159:1048-2054.; 2. Cherek DR, et al. 2002. *Psychopharmacology*;159:266-274; 3. Schneider LS, et al. *Am J Psychiatry*. 2016;173(5):465-472.

Conclusion

- The risk for aggression should be assessed via clinical, actuarial and/or structured clinical strategies
- CMS and Joint Commission have specific standards on the use of restraint and seclusion, and institutions should have protocols in place and staff appropriately trained
- There are no FDA-approved medications for aggression, but agents have shown varying degrees of efficacy in its management

Call to Action



- Reduce the risk and impact of long-term aggression in psychiatric patients by implementing best practices for management
- Identify pharmacotherapies that may help mitigate aggression in psychiatric patients

Questions & Answers

Don’t forget to fill out your evaluations to collect your credit.