

Special Topics in Psychopharmacology

Jonathan Bolton MD
Center for Rural and Community
Behavioral Health
University of New Mexico

Special Topics

- Emergencies
 - The agitated/violent patient
 - Acute dystonia
 - Catatonia
 - Neuroleptic Malignant Syndrome
 - Hypertensive crisis due to MAOIs
 - Delirium
- Pregnancy
- Geriatric patients

Psychiatric Emergencies

The agitated/violent patient

- Causes: mania, intoxication/withdrawal, delirium, dementia, anxiety
- Interventions
 - Non-pharmacological: Show of strength; behavioral calming; food; physical restraints.
 - Pharmacological: ‘Rapid Tranquilization’

Rapid Tranquilization

- Indications: harm to self/others; psychiatric evaluation
- Risks: loss of consciousness; airway obstruction; respiratory distress/arrest; hypotension, CV collapse; cardiac arrest; seizure; EPS and NMS
- Documentation: reasons; legal situation; physical assessment; diagnosis; drugs given; outcome; monitoring chart; ongoing plan.

Rapid Tranquilization

- Administration: po > im > iv
- Avoid cocktails
- Alternate classes (Benzodiazepine/Antipsychotic)

Rapid Tranquilization

- Antipsychotics
 - First generation
 - High potency (haloperidol/Haldol)
 - Low potency (chlorpromazine/Thorazine)
 - Second generation
 - Olanzapine (Zyprexa, Zydys)
 - Ziprasidone (Geodon)
 - Quetiapine (Seroquel)
- Benzodiazepines
 - Lorazepam (Ativan)
 - Diazepam (Valium)

Medications for Rapid Tranquilization of Agitated Patients

* Medication	IM	Dose *Dose PO	* Average total dose for tranquilization
Haloperidol/Haldol	2.5-5 mg	5-10 mg	10-20 mg
Chlorpromazine/Thorazine	50 mg	100 mg	300-600 mg
Olanzapine/Zyprexa, Zydis	2.5-10 mg	2.5-5 mg	10-20 mg
Ziprasidone/Geodon	10-20 mg	40-160 mg	10-20 mg
Aripiprazole/Abilify	9.75 mg	10-30 mg	9.75-19.5 mg
Lorazepam/Ativan	0.5-1 mg	1-2 mg	4-8 mg
Diazepam/Valium	NA	5-10 mg	20-60 mg

Acute Dystonias

- Torticollis, ophisthotonos, oculogyric crisis, trismus, laryngospasm
- Anticholinergic Rx
 - Benztropine/Cogentin 2 mg
- Antihistamine Rx
 - Diphenhydramine/Benadryl 50-100 mg
- Botulinum toxin

Catatonia

- Sxs: Cataplexy, waxy flexibility, mutism, resistance to instructions/being moved (negativism), intermittent agitation
- Causes: hepatic encephalopathy, ketoacidosis, post-ictal states, basal ganglia lesions.
- Associated with affective states, schizophrenia
- Tx: Benzodiazepine (Ativan 1-2 mg iv)

Neuroleptic Malignant Syndrome

- 80% cases within first two weeks of tx
- Lasts up to 14 days
- Fatal in 20% cases

- Tx
 - Discontinue medication
 - Support vital functions
 - Dantrolene (iv, 1 mg/kg q 6 hours, up to 2 wks)
 - Bromocriptine (up to 5 mg tid)

Delirium

- Change in consciousness and cognition
 - Fluctuating course
 - Organic basis (intox/withdrawal, infections, endocrinopathies, metabolic)
- Treatment
 - Antipsychotic
 - Haloperidol 0.5 mg bid
 - Benzodiazepines
 - Lorazepam, Oxazepam

Pregnancy

FDA Pregnancy Classes

- A: Adequate and well-controlled studies have failed to demonstrate a risk to the fetus in the first trimester of pregnancy (and there is no evidence of risk in later trimesters)
- B: Animal reproduction studies have failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women.
 - Diphenhydramine, Buspirone, Clozapine, Lurasidone

- C: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks.

– Most FGA and SGAs; SSRIs (except Paroxetine); TCAs (except NTP, ATP); Lamotrigine; Zolpidem, Zaleplon; Benztropine; Naltrexone

D: There is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience or studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks

Nortriptyline, Amitriptyline; Paroxetine;
Carbamazepine, Valproate, Lithium;
Benzodiazepines

- X: Studies in animals or humans have demonstrated fetal abnormalities and/or there is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience, and the risks involved in use of the drug in pregnant women clearly outweigh potential benefits.

Geriatric Psychiatry

Psychotropic Prescribing in Elderly

- Inventory all medications
- Screen and eliminated unnecessary/duplicates
- Select most appropriate drugs
- Define clear indication for each drug
- Educate patient about appropriate use
- Document each drug's effectiveness; adjust
- Assess compliance
- Reassess on ongoing basis

Side Effects of Psychotropics in Older People

- Decreased CNS arousal: sedation, apathy, fatigue, withdrawal, depressed mood, confusion
- Peripheral anticholinergic blockade: dry mouth, constipation, atonic bladder, blurry vision
- Central anticholinergic blockade: confusion, disorientation, visual hallucinosis, assaultiveness
- Alpha-adrenergic blockade: orthostatic hypotension
- Dopaminergic blockade: EPS, TD

Geriatric Psychiatry: Dementia

- Syndrome: memory loss + impaired language/judgment/behavior
- Progressive Dementias
 - Alzheimer's Disease
 - Vascular Dementia
 - Lewy Body Dementia
 - Frontotemporal Dementia

Dementia cont

- Conditions with dementia
 - Huntington's Disease
 - Traumatic Brain Injury
 - HIV-associated dementia
 - Creutzfeld-Jakob disease
 - Secondary dementia (eg Parkinson's)
- Reversible dementia
 - Infection/immune
 - Metabolic/Endocrine
 - Nutritional
 - Medications
 - Subdural hematoma
 - Poisoning
 - CV conditions
 - Normal pressure hydrocephalus

Dementia and Mild Cognitive Impairment: Treatment

- Cholinesterase Inhibitors
 - Donepezil (Aricept)
 - Rivastigmine (Exelon)
 - Galantamine (Razadyne)
- NMDA receptor agonists
 - Memantine (Namenda)