Updates in Geriatric Psychiatry

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Disclosures

I have no significant financial relationships with industry to disclose.
Geriatric Population Growth

2050:  88.5 million (25% population)
Prevalence of Geriatric Depression

- **Major Depression**
  - 1-3% community
  - 12% primary care settings
  - 21-37% hospitals, nursing homes
- **Minor Depression** 15%
- **Adjustment with Depression** 4%
- **Dysthymia** 2%
Depression in Medical Illness

• Post-Stroke 50%
• Post-Myocardial Infarction 30%
• Parkinson’s disease 50%
• Alzheimer’s disease 40%
• Cancer 25%
Difficulties in Case Recognition

• 40% of elderly who commit suicide have seen a physician within 1 week of death
• Misconceptions: “Depression is normal as you age”
• Stigma
• Stoicism
• Cognitive Impairment
Reasons Patients Seek Help

- Persistent pains (headache, backache, gastrointestinal)
- Nonspecific somatic complaints
- Weight loss, appetite loss
- Excess disability
- Easy fatigability
- Sleep disturbances
Unique Clinical Presentation

• Apathy
• Social Withdrawal
• Anxiety
• Somatic complaints
• Delusions
• Less common: guilt, helplessness, worthlessness
Suicide Risk Factors

• White male
• Living alone, limited supports
• Psychotic features
• Alcoholism
• Physical illness
• Disability/debility
• Chronic pain
Psychotic Depression

- 4% in the community vs. 40% of hospitalized depressed patients
- Mood congruent delusions (somatic, nihilistic, jealousy)
- Themes of guilt, inadequacy, disease, punishment
- Pronounced agitation or retardation
- Persisting low use of antipsychotics, but require combination treatment
Vascular Depression

• Clinical syndrome
  – Apathy
  – Lack of insight
  – Executive dysfunction

• Pathological changes
  – Small vessel cerebrovascular disease in fronto-striatal pathways

• Treatment Resistance
Choosing an Antidepressant

- Safety
- Tolerability
- Side Effect profile
- Drug interactions
- History of response
Medications in Older Adults

• Pharmacokinetic factors
  • Absorption
  • Distribution
  • Metabolism
  • Elimination

• Pharmacodynamic factors
  • Sensitivity: anticholinergic, dopaminergic, orthostatic changes, SIADH
# Antidepressant dosing

<table>
<thead>
<tr>
<th>Medication</th>
<th>Starting (mg/day)</th>
<th>Therapeutic Range (mg/day)</th>
<th>Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citalopram</td>
<td>10</td>
<td>10 - 20</td>
<td>Mild GI, QTC prolongation</td>
</tr>
<tr>
<td>Escitalopram</td>
<td>5</td>
<td>5- 20</td>
<td>Very Mild GI</td>
</tr>
<tr>
<td>Sertraline</td>
<td>25</td>
<td>50 - 150</td>
<td>Sedation, Moderate GI</td>
</tr>
<tr>
<td>Paroxetine</td>
<td>10</td>
<td>10 - 30</td>
<td>Sedation, Anticholinergic</td>
</tr>
<tr>
<td>Fluoxetine</td>
<td>10</td>
<td>10 - 60</td>
<td>Agitation, Insomnia</td>
</tr>
<tr>
<td>Mirtazapine</td>
<td>7.5</td>
<td>15 - 45</td>
<td>Sedation, Weight gain</td>
</tr>
</tbody>
</table>
## Antidepressant dosing, cont.

<table>
<thead>
<tr>
<th>Medication</th>
<th>Starting (mg/day)</th>
<th>Therapeutic Range (mg/day)</th>
<th>Side Effects</th>
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</thead>
<tbody>
<tr>
<td>Bupropion</td>
<td>75</td>
<td>75 - 300</td>
<td>Anxiety, Insomnia, Constipation</td>
</tr>
<tr>
<td>Venlafaxine</td>
<td>37.5</td>
<td>75 - 225</td>
<td>Moderate GI, Sweating, Hypertension</td>
</tr>
<tr>
<td>Duloxetine</td>
<td>20</td>
<td>30 - 120</td>
<td>Dry Mouth, Constipation</td>
</tr>
<tr>
<td>Desvenlafaxine</td>
<td>50</td>
<td>50 - 100</td>
<td>Orthostasis</td>
</tr>
<tr>
<td>Nortriptyline (TCA)</td>
<td>10</td>
<td>30 - 100</td>
<td>Sedation, cardiac, anticholinergic</td>
</tr>
<tr>
<td>Tranylcypromine (MAOI)</td>
<td>10</td>
<td>10 - 30</td>
<td>Insomnia, Weakness GI, Orthostasis, HTN, Hypoglycemia</td>
</tr>
</tbody>
</table>
Treatment Refractory Depression

• ECT
  – Success rate 80% or more in elderly patients refractory to medication trials
  – Tolerated as well as younger patients
  – Relapse rate 50% without post-ECT intervention (such as maintenance ECT + antidepressant)
  – Cognitive worsening usually transient, even in dementia
Treatment Refractory Depression

• Atypical Antipsychotics
  – Aripiprazole: 2.5 – 15mg
  – Quetiapine: up to 100mg

• TMS
  – Degree of prefrontal atrophy may predict response
  – Role in vascular depression

• Lithium, Lamotrigine

• Methylphenidate, Modafinil

• Ketamine
Dementia

• DSM 5 Changes
• Neurocognitive disorders
  – Delirium
  – Major Neurocognitive Disorder (dementia)
  – Minor Neurocognitive Disorder (new)
• Removal of memory impairment as essential criterion
• Use of objective neurocognitive assessment
• Specification of behavioral symptoms
Major Neurocognitive Disorder

• Any cognitive domain
  – memory, complex attention, executive function, learning, language, perceptual-motor, social cognition)

• Interference with everyday activities
  – complex iADLS: paying bills, managing medications

• Objective testing (neuropsychological)
Descriptive Features

- With Psychosis
- With Mood Disturbance
- with Apathy
- with Agitation
- with other Behavioral Disturbance
Mild Neurocognitive Disorder

- Modest decline in one or more domains
- Neurocognitive performance is 1-2 SD below norms
- Deficits insufficient to interfere with independence/ iADLs but require compensatory strategies, greater efforts
- Similar to description of MCI (mild cognitive impairment)
Subtypes of Dementia by Etiology

• Alzheimer’s disease
• Frontotemporal lobar degeneration
• Lewy Body Disease
• Vascular Disease
• Traumatic Brain Injury
• HIV infection
• Parkinson’s disease
Dementia

• Goals of Treatment
  1. Slowing Cognitive Decline
  2. Improving Daily Functioning
  3. Reducing Behavioral Complications
  4. Enhancing Or Maintaining Quality of Life
  5. Supporting Caregiver Health
<table>
<thead>
<tr>
<th>Disease</th>
<th>First Symptom</th>
<th>Mental Status</th>
<th>Neuropsych</th>
<th>Imaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alzheimer’s</td>
<td>Memory Loss</td>
<td>Episodic memory loss</td>
<td>Initially normal</td>
<td>Entorhinal cortex and hippocampal atrophy</td>
</tr>
<tr>
<td>FTD</td>
<td>Apathy; Poor insight/judgement; Speech; Hyperorality</td>
<td>Frontal/executive, language; spares drawing</td>
<td>Apathy, disinhibition, hyperorality, euphoria, depression</td>
<td>Frontal, insular or temporal atrophy; spares posterior parietal</td>
</tr>
<tr>
<td>DLB</td>
<td>Visual hallucinations, delirium, Capgras Syndrome, Parkinsonism</td>
<td>Drawing and frontal/executive; spares memory; delirium prone</td>
<td>Visual hallucinations, depression, sleep disorder, delusions</td>
<td>Posterior parietal atrophy; hippocampus larger than in Alzheimer’s</td>
</tr>
<tr>
<td>Vascular</td>
<td>Sudden and variable; apathy, focal weakness</td>
<td>Frontal/executive slowing, can spare memory</td>
<td>Apathy, delusions, anxiety</td>
<td>Cortical or subcortical infarctions, confluent white matter disease</td>
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Dementia

The continuum of Alzheimer’s disease
Primary Prevention in Dementia

• Medical/Vascular Risk Factors
  – HTN, Obesity, Diabetes

• Lifestyle changes
  – Diet and Nutrition
    • Mediterranean diet, mixture of nutrients/antioxidants
  – Physical Exercise
    • Moderate activity (Strength training, Aerobic exercise, Tai Chi, Exergaming: cybercycling)
  – Cognitive Stimulation
    • “Neurobics” industry
## Medications for Cognitive Decline

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<th>Stage of dementia</th>
<th>Starting dose</th>
<th>Target Dose</th>
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<tr>
<td>Donepezil (Aricept)</td>
<td>Mild, Moderate and Severe</td>
<td>5mg daily</td>
<td>10-23mg</td>
</tr>
<tr>
<td>Rivastigmine (Exelon)</td>
<td>Mild, moderate</td>
<td>1.5mg BID</td>
<td>6mg BID</td>
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<tr>
<td>Rivastigmine patch</td>
<td>Mild, moderate</td>
<td>4.6 mg daily</td>
<td>9.6 - 13.3 mg</td>
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<tr>
<td>Galantamine (Razadyne)</td>
<td>Mild, moderate</td>
<td>4mg BID</td>
<td>12mg BID</td>
</tr>
<tr>
<td>Memantine (Namenda)</td>
<td>Moderate, severe</td>
<td>5mg daily (or 7mg ER)</td>
<td>10mg BID (or 28mg ER)</td>
</tr>
</tbody>
</table>
Goals of Treatment

• Set realistic expectations
• Slow cognitive decline
• Improve daily functioning
• Reduce behavioral complications
• Support caregiver health
• Foster a safe environment
• Promote social engagement
• Maintain quality of life
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Acetylcholinesterase Inhibitors

- No significant difference in efficacy or tolerability
- 2-3% experience nausea, vomiting, diarrhea
- 2% experience bradycardia; monitoring recommending with cardiac disease
- Daily dosing schedule of Donepezil useful
- Rivastigmine approved for PD, patch available
- Combination therapy with Memantine most useful for moderate to advanced disease
Depression and Dementia

- Episodes of pseudo-depression predict dementia: 50% progress in 5 years
- Worsens the course of illness
- Clues include facial expression, sobbing, irritability, fear, loss of interest/motivation
- Short-lived, recurrent symptoms
- Cornell Scale for Depression in Dementia (CSDD)
Behavioral and Neuropsychiatric Symptoms in Dementia

• Mood and Psychotic symptoms and Behavioral Agitation
• Accelerate disease progression
• Worsen functional decline, quality of life
• Cause significant caregiver distress
• Result in earlier nursing home placement
Depression in Dementia

- Prior history of depression in 30% patients
- Pseudodementia
  - Cognitive symptoms secondary to depression
  - Predictor of dementia: 50% progress in 5 years
- Worsens the course of both dementia and medical illness
Identifying Depression in Dementia

• Facial expression, sobbing
• Irritability and fear
• Mood symptoms short-lived, recurrent
• Loss of interest and motivation
• Cornell Scale for Depression in Dementia (CSDD)
Treatment of Depression in Dementia

• Mild/moderate vs. moderate/severe illness
• Generally well tolerated, efficacy unclear
• Side effects:
  – QTc prolongation with Citalopram >20mg
  – Common: GI distress, Dizziness, Headache, Sedation
  – Less common: Hyponatremia
Electroconvulsive Therapy

- Overall success rate 80% in elderly patients refractory to medication trials
- Elderly patients tolerate the treatment as well as younger patients
- Relapse rate is 50% without prophylactic intervention post-ECT; best response is to maintenance ECT + antidepressant
- Cognitive worsening usually transient, even in dementia
Psychosis and Dementia

• 30-50% of patients with dementia
• Types of delusions
  – Simple, non-bizarre
  – Theft, jealousy
• Hallucinations
  – Visual > Auditory
• Differential diagnosis: Psychotic Depression, Delirium
Agitation in Dementia

• What does “agitated” mean?
  • Paranoid, Restless, Pacing, Yelling, Aggressive, Impulsive, Intrusive, Resistant to Care, Hypersexual, Hallucinating

• Rule out Medical Cause
  • Infections (UTI, PNA)
  • Constipation
  • Pain
  • Sensory Impairment
  • Metabolic change (Hyponatremia, Hypoglycemia)
  • Medications
Delirium in Dementia

• Medications
  – Anticholinergic: Atropine, Benztropine, Hydroxyzine, Diphenhydramine, Scopolamine, Meclizine, Amitryptyline, Imipramine, Thorazine
  – Corticosteroids: Hydrocortisone, Prednisone
  – Dopaminergic: Amantadine, Bromocriptine, Levodopa
  – Anesthetics: Propofol

• Substances
  – Alcohol, Benzodiazepines, Opioids
Psychosocial Approaches to Agitation

• Routines
  – Rituals/repetitions, concrete tasks, sleep schedule

• Redirection
  – Food, music, old movies

• Reassurance
  – Comforting words, weighted blankets, rocking, social interactions, animal therapies

• Reorganization
  – Low noise, calming and simplified environments
# Antipsychotic Dosing in the Elderly

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dosage in Dementia, Psychotic Depression</th>
<th>Dosage in Schizophrenia, Mania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risperidone (Risperdal)</td>
<td>0.5mg – 2mg</td>
<td>up to 4mg</td>
</tr>
<tr>
<td>Olanzapine (Zyprexa)</td>
<td>2.5-10mg</td>
<td>up to 15mg</td>
</tr>
<tr>
<td>Quetiapine (Seroquel)</td>
<td>50- 200mg</td>
<td>up to 300mg</td>
</tr>
<tr>
<td>Aripiprazole (Abilify)</td>
<td>2.5 – 15mg</td>
<td>up to 30mg</td>
</tr>
<tr>
<td>Ziprasidone (Geodon)</td>
<td>10-20mg</td>
<td>up to 80mg</td>
</tr>
<tr>
<td>Clozapine (Clozaril)</td>
<td>12.5mg – 50mg</td>
<td>up to 300mg</td>
</tr>
</tbody>
</table>
# Newer Antipsychotics

<table>
<thead>
<tr>
<th>Medication</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asenapine (Saphris)</td>
<td>Well tolerated up to 10mg BID</td>
<td>Somnolence, Orthostatic hypotension</td>
</tr>
<tr>
<td></td>
<td>May improve cognition</td>
<td></td>
</tr>
<tr>
<td>Paliperidone (Invega)</td>
<td>Well tolerated 3-12mg</td>
<td>Adjust for renal impairment</td>
</tr>
<tr>
<td></td>
<td>Also comes as IM injection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mainly renal excretion</td>
<td></td>
</tr>
<tr>
<td>Lurasidone (Latuda)</td>
<td>Low risk of metabolic changes or hypotension</td>
<td>Somnolence, EPS</td>
</tr>
<tr>
<td>Iloperidone (Fanapt)</td>
<td>Low anticholinergic, low EPS, low prolactin</td>
<td>Dizziness, Orthostatic hypotension, Tachycardia, QTC prolongation</td>
</tr>
</tbody>
</table>
CATIE-AD Trial

- Antipsychotic (mean) doses:
  - Risperdal 1 mg
  - Zyprexa 5.5 mg
  - Seroquel 56.5 mg

- Side effects offset efficacy

- Most helpful for suspicious thoughts, paranoid delusions, hostile/aggressive behavior

- No benefit for functioning, quality of life or caregiving time needed
Antipsychotics in Dementia

FDA Warnings

— Increased risk of cerebrovascular events
  • 1.9 – 2.2 % with antipsychotics
  • 0.8 – 0.9% with placebo

— Increased risk of mortality
  • 3.5 – 4.5 % with antipsychotics
  • 2.3 – 2.6% with placebo
Alternatives to Antipsychotics

• Memantine
• Cholinesterase inhibitors
• Antidepressants
  – SSRIs
  – Trazodone
• Anti-epileptics
  – Carbamazepine
  – Lamotrigine
  – Gabapentin
Psychosocial Interventions

- Quiet, simple environments
- Reorientation cues (clocks, calendars)
- Routines, simple tasks
- Comforting stimulation (music, movies)
- Regular sleep schedule
- Social interactions
- Dance therapies
- Animal-assisted therapies
Caregivers

• 2013: 17 billion hours of unpaid care ($220 billion value)
• Average time spent 22 hrs/week
• Worse caregiver health/burden predicts institutionalization
• Caregivers of hospitalized dementia patients report higher depressive symptoms (63% vs 43% non-hospitalized)
• Spousal caregivers have 63% higher mortality rate than noncaregivers
Resources

• Housing Options
  – Assisted Living (average cost $41,724/year)
  – Independent Living
  – Skilled Nursing Facility (average cost $87,235/year)

• Home Care
  – Non-medical aides, visiting nurses

• Community Services
  – Adult Day Care programs (average cost $70/day)
  – Elder Law Attorneys
  – Geriatric Care Managers
  – Meal Delivery, Transportation
Alzheimer’s Association

• Education, support groups, social engagement programs
• www.alz.org
• 24/7 Helpline 1-800-272-3900
Massachusetts General Hospital  
Department of Psychiatry  

*Presents*

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