Dementia with Behavioral Disturbance: Evaluation & Management

Maureen C. Nash, MD, MS, FAPA, FACP
National PACE Association
Boston, October 2017
Disclosures

No Financial Conflict of Interest
Off-label use of medications will be discussed

*Off-label does NOT mean or imply illegal, ill-advised, or non-evidence based
Behavior as communication - telling us about people’s basic needs
704 nursing-home pts using Norwegian versions of the Clinical Dementia Rating scale (CDR) and the neuropsychiatric inventory (NPI)

575 patients (82 %) had dementia

75 % had at least one significant NP syndrome

Most common: delusions, apathy or irritability

NP symptoms grouped into four categories:

- psychosis, apathy, affective symptoms and agitation
Not on the NPI: Inappropriate sexual behavior

Originally conceptualized based on actions
- sexualized language
- sexual acting out
- socially inappropriate with sexual suggestiveness

More recently behavior defined motivationally
- intimacy seeking
- disinhibited

Medeiros K, Rosenberg PB, Baker SA, Onyike CU. Improper Sexual Behaviors in Elders with Dementia Living in Residential Care *Dement Geriatr Cogn Disord* 2008;26:370-377
Clinical Pearls Symptom vs Syndrome

- Depression and Anxiety are symptoms
- They can appear in depressive and anxiety disorders or syndromes or by themselves
- In older adults, anxiety and depressive symptoms are very common but new onset depressive and anxiety disorders are less common
Clinical Pearl - etiology of aggression

- Aggression in those with dementia occurs primarily at 2 times:
  - Person is denied something or something is taken away
  - With personal cares
- 2 NH and 2 geriatric psychiatry units. 32/82 “violent.” Norway. Majority of incidents by minority of residents. Injury to anyone rare.
- Most frequent intervention to defuse situation:
  - Talking with person

What do these mean?

Sadness, Crying
Pacing
Clenched fists
Hitting
Pushing away
Calling out/Screaming
Inconsolable
## PAIN - AD scale

<table>
<thead>
<tr>
<th>Items</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) Breathing independent of vocalization</td>
<td>Normal</td>
<td>Occasional labored breathing.</td>
<td>Noisy labored breathing.</td>
</tr>
<tr>
<td>B) Negative vocalization</td>
<td>None</td>
<td>Occ. moaning. Speech w/ negative or disapproving quality.</td>
<td>Repeated calling out. Loud moaning or groaning. Crying</td>
</tr>
<tr>
<td>E) Consolability</td>
<td>No need to console</td>
<td>Distracted or reassured by voice or touch.</td>
<td>Unable to console, distract or reassure.</td>
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Therapeutic Approach

- Identify/Assess Causes of Behavior
  - Identify unmet physical & psychological Needs
  - Identify environmental causes
  - Recognize psychiatric symptoms
  - Key stage for assessments of Cognitive and Functional Abilities
  - Utilize behavioral rating scales

- Select Interventions based on assessments
  - Caregiving Approaches
  - Adapt Environment
  - Evidence-based interventions (sensory, activity, communication)
  - Staff Training

- Apply Interventions
  - Behavior rating scales
  - Staff training
  - Individualize interventions
  - Use preferences and positive outcomes
  - Quality of life scales
  - Caregiver report

- Monitor Outcomes

- Reevaluate Needs
Annie- Acute Care

82 yo F admitted w CVA and decreased ability to complete self care. She was confused in the hospital, and was unable to return home. Pt unwilling to participate in therapy and spends all day in bed.

Reports that she wants to die and varies in level of orientation throughout the day.

Assessment & what do low scores mean?

- Alzheimer’s Dementia
  - Slow onset, limited insight, overestimates abilities

- Delirium
  - Fluctuations in attention, Autonomic dysfunction

- Psychosis
  - Disorganized, poor attention, paranoia

- Depression
  - Test scores lower than ADL ability, limited attention, negative

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Bottom Line

- Know what the tests you use actually test
  - what a score means
- Low score does not always mean dementia
- Older adults are very vulnerable to misdiagnosis in acute care
- Always repeat tests when stable (usually after DC)
- Always balance functional observations with standardized assessments
Neurocognitive Domains DSM V

Complex Attention
- Executive Function
  - Planning
  - Decision Making
- Working Memory
  - Inhibition
  - Error Correction
- Flexibility

Divided Sustained selective
- Learning and Memory
  - Working Memory
  - Short Term Memory
  - Explicit and Implicit Memory
- Semantic

Social Cognition
- Theory of Mind
- Perspective Taking
- Emotional Recognition

Perceptual-Motor
- Construction
  - Visual Perceptual
  - Gnosia
  - Praxis

Language
- Expressive
- Grammar
- Syntax
- Receptive

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Treatment Planning

• Recognize and correctly “label” behaviors
• Adapt environment to promote ADL completion
• Assist in providing information to clarify diagnosis
• Recognize memory and orientation may be more intact than social/language skills
• Identify appropriate communication techniques (reality orientation vs. validation/distractions)
• Educate family and caregivers
• Set realistic goals
Summary for Treatment of Behavior Disturbance

- Assess for type of dementia
  - DAT/VD
  - LBD/PDD
  - FTLD
  - Other

- Assess for functional status
  - Mild, moderate, severe

- Always use behavioral strategies –
  - teach caregivers and adapt the environment

- Memantine and Cholinesterase Inhibitors as first line agents: minimal risk, moderate efficacy

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Monitor for delirium, even “sub” deliriums such as constipation, dehydration and pain, treat delirium aggressively

- Treat pain!
- Eating! Drinking fluids!
- Urinating, defecating!

Discontinue or lower harmful medications

- look for meds that cause confusion (Anticholinergics, BZD)
- evaluate for Drug-Drug Interactions
- dose appropriately for renal function
- Based on life expectancy, do they need statin etc?
- Do not over treat blood sugars or blood pressure
• If depressed, trial supportive measures then consider antidepressants
• If manic-like, trial mood stabilizer
• If paranoid, delusional or fearful, trial antipsychotic medications
• If aggressive
  • antipsychotic medication
  • consider trial of scheduled pain medication
  • avoid dehydration and constipation
  • carbamazepine or valproic acid?
Summary continued

- If restless, consider akathisia (antipsychotics, antidepressants) or pain or constipation or urinary retention. Find a safe place for the person to walk.
- If calling out and moaning, consider pain
- If repetitive questions, use behavioral interventions
- If wandering, secure the environment
- If up at night, feed the person, find a spot and provide an activity that they enjoy. Encourage early morning bright light and increased exercise early in day.
Person Environment Mismatch => Behavior Disturbance

Person
- has limited functional abilities & unmet needs

Environment
- too challenging

Unable to engage due to demands of ADLs and leisure

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AVERAGE CAREGIVER BURDEN FROM NPI OF 390 PATIENTS DURING INPATIENT GEROPSYCH TREATMENT - UNPUBLISHED DATA

- Iritibility/ Lability
- Anxiety
- Disinhibition
- Halucinations
- Aggression/Agitation

Admit vs Discharge
AVERAGE SYMPTOM SEVERITY FROM NPI OF 390 PATIENTS DURING INPATIENT GERIPYSCH TREATMENT - UNPUBLISHED DATA
Communication challenges

- Decreased ability to understand language
- Decreased ability to use expressive language
- Intact social speech misleading others to underestimate deficits
  - Especially in Alzheimer’s Disease
The approaches include:

- Using nonverbal communication such as cheerful greeting
- Responding to the emotions underlying speech
- Recognizing behaviors as communication of challenges or success
Categories of Interventions

- Sensory Oriented
- Emotion Oriented
- Behavior Oriented
- Cognitive Oriented
- Environment Oriented

Kverno, K. S., Black, B. S., Nolan, M. T., & Rabins, P. V. (2009)
Example Plan of Care with Sensory and Emotion Oriented interventions

The story of Grace

76 year woman with advanced Alzheimer's, in a secure memory-care. Once an avid gardener Grace now spends her days in a wheelchair watching reruns of old television shows. Her daughter is concerned about her lack of activity, poor ability to sleep, and anxious, tearful behavior. When brought outside to the garden, Grace does not seem at all interested in the garden.
What is caregiver education?

• Providing direct caregivers with the tools to provide appropriate interventions
• Caregiver Support Groups
  • Research shows it decrease stress and improves quality of life
• Designing and providing stage specific treatment plans
  • Uses current evidence
  • Based on clinical expertise

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Cooper et.al. 2012; Kverno et al 2009; O'Neil et al., 2011
Evidence Review

Summary of what works

- Caregiver training
- Specific treatment plans
- Client centered techniques
- Meeting basic needs
- Pain control
Psychiatric Symptoms amenable to treatment with medications

- Paranoia and delusions
- Hallucinations
- Depression
- Sometimes anxiety
- Pain
- ?agitation?
Symptoms not usually amenable to medications

- Wandering
- Calling out (not related to pain)
- Repetitive questions
- Anxiety related to having memory loss
- Psychomotor agitation
- Sleep problems
- ?agitation?
HTA-SADD trial: Depression in DAT

- Decreased depression, equally, in all 3 groups, including placebo

- Adverse effects
  - 111 people, 26% of those on placebo
  - 107 people, 43% of those on sertraline (goal dose 150mg)
  - 107 people, 41% of those on mirtazapine (goal dose 45mg)

- 5 people in each treatment arm (including placebo) died by week 39

The Lancet Volume 378 (9789), Pages 403 - 411, 30 July 2011
HTA-SADD trial: Depression in DAT

Conclusions?? Here from the authors:

"Analysis of the data suggests clearly that antidepressants ... are not clinically effective...for depression in dementia"

Antidepressants are not FDA approved to treat depression in dementia.

Roughly 5% died no matter medications or placebo. What if what people are labeling as depression is part of the dying process?

The Lancet Volume 378 (9789), Pages 403 - 411, 30 July 2011
Discontinuing SSRI can Worsen Depressive Symptoms in those with Dementia: the DESEP trial

- Double blind, randomized, parallel group,
  - 128 patients with dementia but no MDD, treated with SSRIs,
  - 50% stopped and 50% continued treatment
- After 25 weeks
  - Depression scores worsened more than 30%
    - 54% of discontinuers, 29% of continuers
  - Low levels of symptoms increased to severe symptoms
    - 14% of discontinuers, 3% of continuers
  - # who dropped out due to increased NP symptoms
    - 21% of discontinuers, 6% of continuers

Bergh S et al. Discontinuation of antidepressants in people with dementia and neuropsychiatric symptoms. BMJ 2012 Mar 9; 344:e1566

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Treatment Planning for those with Alzheimer’s Disease

• People respond positively to structure and simple routine
• ADL independence may be encouraged and maintained by simplifying tasks, providing setup, and problem solving routine
• Validation - communicate with emotions
• Distraction - decreases false ideas
• Provide Long Term Memory based activities
• Positive response to social norms, “familiar life patterns”
• Develop client-centered interventions
• Educate family and caregivers
“Algorithm”
for treating those with Alz /Vasc with significant behaviors

• 1st line: Memantine dosed by renal function + Cholinesterase Inhibitor (donepezil or rivastigmine patch)

• Agitation/Aggression: 2nd line: Atypical antipsychotic
  – Risperidone 1-2mg per 24 hours, dosed bid
  – Ziprasidone 20-100mg po bid with meals, increase dose slowly
  – Consider aripiprazole, olanzepine (at < 10mg/24 hours)

• 3rd line: VPA for anxiety or impulse control

• 3rd line: SSRI for depressive symptoms
  – Citalopram 10-20mg qday
  – Avoid fluoxetine due to half life and drug-drug interactions

• Simultaneously: opiates for pain, recognizing and treating constipation and urinary retention, etc
Dementia Types: LBD/PDD

- Lewy body Disease/ Parkinson’s Disease Dementia
  - Slowed retrieval of memories and words
  - Perseveration or getting stuck on one thought or topic
  - Fluctuating status and symptoms throughout the day
  - Hallucinations as side effect of Parkinsons medications or as natural part of the disease
  - Quite sensitive to psychoactive medications
Treatment Planning for those with Lewy Body Dementia

- Varies greatly person to person
- Plan for “the safest” when looking at level of care
- Monitor side effects of medications
- Caregiver Education
- Home safety evaluation
- Do not over react to hallucinations
- Provide a variety of activities to accommodate for cognitive fluctuations, grade appropriately
- Structure, support, and predictable environment
Psychosis +/- Behavior Disturbance in LBD and PDD

- Quetiapine has been shown to be effective, lower dose better
- Side effects include somnulence, dizziness, postural hypotension and worsening Parkinsonian motor symptoms
- Clozapine is also used in these illnesses for the same symptoms with fewer motor side effects, but intrusive lab testing required
“Algorithm” for treating those with PDD/LBD with significant behaviors

- **1st line**: Memantine dosed by renal function + Cholinesterase Inhibitor (donepezil or rivastigmine patch)
- **Depression**:
  - Bupropion SR 100mg qday, NTP 25-75 qhs
- **Restless Leg Syndrome**:
  - Dopaminergic agents, consider clonazepam
- **REM sleep disorder**:
- **Agitation/Aggression**:
- **3rd line**: VPA for anxiety or impulse control
- **3rd line**: for depressive symptoms
- **Simultaneously**: opiates for pain, recognizing and treating constipation and urinary retention, etc
Treatment Planning for those with Frontal Temporal Dementia

- Recognize and correctly “label” behaviors
- Adapt environment to promote ADL completion
- Assist in providing information to clarify diagnosis
- Recognize memory and orientation may be more intact than social/ language skills
- Identify appropriate communication techniques (reality orientation vs. validation/ distraction)
- Educate family and caregivers
- Set realistic goals
Treatment for FTLD

- Discontinuing all medications that are possible
- For paranoia and delusions
  - scheduled risperidone or ziprasidone
  - 2nd line perphenazine
- If pt develops disinhibited behavior
  - Use scheduled VPA
  - titrate dose for low or no side effects and efficacy, not a blood level
“Algorithm” for treating those with Inappropriate Sexual Behaviors

• Attempt to classify behavior appropriately
  • Is it even sexual?
  • Is it intimacy seeking or predatory?

• Trial non-pharmacological interventions
  • Ex. One-piece outfit

• Lowering or discontinuing dopaminergic agents (carbidopa/levodopa, ropinarole etc)

• Tapering off of benzodiazepines
Treating inappropriate sexual behavior

• If manic-type behavior: discontinue all antidepressants

• If behavior is impulsive or disinhibited: mood stabilizer

• If behavior is related to libido and guardian or health care power of attorney give informed consent,
  • consider anti-androgen treatment (medroxyprogesterone)

• Discharge patient to a single gender facility or unit
Inappropriate Sexual Behavior

- No Randomized Controlled Trials exist
- Case reports/case series
  - haloperidol, olanzapine, quetiapine, zuclopenthixol
  - memantine
  - clomipramine, paroxetine, citalopram *watch for manic like exacerbation
  - lithium
  - rivastigmine
  - carbamazepine, gabapentin
  - medroxyprogesterone, cyproterone acetate, leuprolide and estrogen
  - Non-hormonal anti-androgens (cimetidine, spironolactone and ketoconazole)

Communication

• Nonverbal vs. Verbal
• Listen
• Positive eye contact, greet, get at person’s level
• Supportive Communication
  – Listen for the message, not the content
  – Watch for emotions, not words
  – Validate feelings
  – Redirect with purposeful activity
  – Do not ask questions, provide simple information

An 88 year old lady is pacing at nurse’s station...
“I left my purse with my Mom and I want to go home.”
Person Centered

• Identify the world in which they live, avoid reality orientation
• People with dementia cannot change, you can
• Respect personality, dislikes, interests
• Retain composure, non reactive responses

Example: 84 year old man with dementia spends the day washing floors with his hands and taking the molding off walls. He says he “has to work”
Touch/Physical Direction

- Clarity of purpose- why are you touching?
- Safety- supportive not confrontational
- Do not create a power struggle
- Awareness of sensory loss in the older adult, provide warning before touch
- Appropriate assessment of abilities to determine need for physical intervention
- Maintain appropriate social space, and then allow the person with dementia to approach.
Use of antidepressants and antipsychotics precede diagnosis of dementia


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Providence ElderPlace Data - using dementia specific medications

Results

Changes in Neuropsychiatric Inventory

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<th>Baseline</th>
<th>Follow-Up</th>
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<td>Total Patients</td>
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<td>10.72</td>
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<tr>
<td>3-month Cohort</td>
<td>12.88</td>
<td>11.29</td>
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<tr>
<td>6-month Cohort</td>
<td>13.46</td>
<td>9.56</td>
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Results

Changes in Neuropsychiatric Inventory Behaviors

Percentage of Patients (N=82)

- Baseline Follow-Up
- Follow-Up

- Delusions: 52% 73%
- Hallucinations: 41% 73%
- Agitated/aggression: 55% 65%
- Anxiety: 59% 63%
- Elated/manic: 43% 50%
- Agitated/depressed: 50% 45%
- Delusions: 11% 26%
- Irritability or irritability: 44% 52%
- Motor disturbance: 74% 74%
- Nighttime behaviors: 61% 43%
- Appetite and eating: 10% 10%

* Indicates significant change.
Results

Severity of Neuropsychiatric Inventory Behaviors – 6 months

Percentage of Patients (N=26)

- Delusions: 27%, 19%, 31%
- Hallucinations: 23%, 8%, 35%
- Agitation/Aggression Depression/Dysphasia: 15%, 23%, 31%
- Anxiety: 19%, 23%, 38%
- Elation/Euphoria: 12%, 15%, 8%

Severities:
- One
- Two
- Three

Behaviors

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Donna:

69 year old woman
history of schizoaffective disorder
admitted for increased psychosis, possible catatonia
decreased level of ADL function, screaming,
uncooperative with care
lives dementia specific care facility due to an
unspecified cognitive disorder.

Care facility complains she has stopped walking but
knows she gets up and moves things in her room when
they are not watching.
Mary - severe anxiety

• 84 year old living alone in an apartment.

• Independent in basic ADLS. Not driving due to legal blindness.

• A man named Jack was coming into her apartment at night, moving things around. She has seen him a number of times at night at her window or in her apartment. He does not speak to her.

• “I don’t know what he’ll do to me!”
Frank

- 79 yo M retired carpenter
- Large man with somewhat imposing presence
- Comes up to the nursing station insisting that his car had been in the parking lot but has been stolen
- Becomes increasingly upset, starts to yell and make a fist
Millie

Millie has lived in an assisted living for years. Recently Millie has become verbally hostile, including scratching and biting with care. She is referred to the hospital. At the hospital, Millie screams every time someone enters room for care. She refuses all interaction, medication, and care.

She looked terrified
Millie

- Noticed that patient looked scared all the time.
- She would claw, growl, bite, hit or posture to hit with every interaction.
- In analysis of the interactions, every single staff member including physicians started every encounter (possibly after a greeting) with a question.
Millie

- Intervention: Used only statements to speak with patient. Even questions as benign as “How are you?” Terrified her (because she did not know the answer?)
- Put signs all around her room and did education with all staff not to ask her any questions.
- Slowly she became calmer
- Left finger foods in her room for her and she began to eat a little
- Reoriented with each contact: “Hi. I am Dr Nash, You are Millie and you are in the hospital. I am glad to see you today.”
- Gave simple direct commands: Come with me, eat this, drink this, we are going to the bathroom now

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Shelby

Shelby, a 64 year old female, frantically pacing the halls, periodically screaming.
Talked to self and would state “he beat me up”. Emotionally labile, poor attention span, frowning expression, and poor self care were seen throughout the day.
Shelly spent 68 days on our unit…