Management of the Behavioral and Psychological Symptoms of Dementia (BPSD)

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Disclosure

• I do not have a vested interest in or affiliation with any corporate organization offering financial support or grant money for this continuing education program, or any affiliation with an organization whose philosophy could potentially bias my presentation.
Objectives

• By the end of the presentation the pharmacist should be able to:
  • Identify the Behavioral and Psychological Symptoms of Dementia (BPSD) in patients.
  • Discuss non-pharmacological approaches in managing BPSD.
  • Implement current standard of care for pharmacological treatment in patients with BPSD.

• By the end of the presentation the pharmacist technician should be able to:
  • Identify the Behavioral and Psychological Symptoms of Dementia (BPSD) in patients.
  • Discuss non-pharmacological approaches in managing BPSD.
  • Recognize pharmacological treatment in patients with BPSD.
Which of the following should be considered when evaluating new or worsening behavioral symptoms in dementia?

A. Delirium
B. Medication side effects
C. Hearing loss
D. Sleep disturbances
E. All of the above
Which of the following can contribute to BPSD?

A. Pain
B. Depression
C. Unmet needs
D. Cognitive deficits
E. All of the above
Which of the following should be done first in patients seemingly experiencing non-emergent visual hallucinations?

A. Start a 1\textsuperscript{st} generation antipsychotic
B. Start a 2\textsuperscript{nd} generation antipsychotic
C. Assess for vision issues
D. Admit them to the psych ward
Which of the following is LEAST appropriate in patients needing treatment for severe agitation?

A. Haloperidol
B. Quetiapine
C. Aripiprazole
D. Risperidone
Outline

• Statistics
• Impact of dementia on healthcare
• BPSD and long term care correlation
• Management of BPSD
Average Life Expectancy in U.S. is Increasing

• The average life expectancy in US in 1900:
  • Males – 46.30 years
  • Females – 48.30 years

• The average life expectancy in US in 2015:
  • Males – 76.30 years
  • Females – 81.20 years

Size of Elderly Population is Growing Rapidly

Within the next 25 years —

The population of Americans aged 65+ will roughly DOUBLE to about 72 million

- Due to longer life spans and aging baby boomers
- By 2030, older adults will account for about 20% of the U.S. population


Healthcare Costs and Long-term Care\textsuperscript{4,5}

• Over 5 million in the US live with dementia
  • Accounts for $259 BILLION in healthcare costs
• Dementia rates expected to TRIPLE by 2050
  • Expected to rise to $1.1 TRILLION
• In 2014:
  • 8,357,100 received long-term care service
    • Home health agencies
    • Nursing homes
    • Hospice
    • Residential care communities
    • Adult day service centers
Dementia and Long-term Care

- Home health agencies (4,742,500)
  - 31.4%

- Nursing homes (1,383,700)
  - 50.4%
    - Patients experiencing BPSD are more likely to be placed in long-term care facilities

- Hospice (1,244,500)
  - 44.7%

- Residential care communities (713,300)
  - 39.6%

- Adult day service centers (273,200)
  - 29.9%

Behavioral and Psychological Symptoms of Dementia (BPSD)
BPSD Overview

• Symptoms and signs of disturbed perception, thought content, mood or behavior that frequently occur in patients with dementia

• Occur in up to 90% of patients with dementia over the course of illness\(^6\)

• Also impacts the caregiver burden\(^7\)
  • Typically cause more distress than the hallmark cognitive symptoms inherent to dementia
  • Often contribute to admission to long-term care institutions
How does memory impairment lead to behavioral problems?

Example

Patient is able to dress himself, but can’t remember where his clothes are kept

Walks around naked
How does language impairment (aphasia) lead to behavioral problems?

Example

Patient who can’t verbally communicate her dislike of milk

Throws milk carton across the room
How does impaired recognition (agnosia) lead to behavioral problems?

Example

Patient can maneuver to pull down his pants, but can’t recognize that a toilet is a receptacle for urination

Urinates on floor
How does impairment in performance of motor tasks (apraxia) lead to behavioral problems?

Example

Patient is continent of bladder, but cannot unzip or unbutton to pull down her pants

Wets her clothing
BPSD Symptom Spectrum

Psychosis

Depression

Sleep issues

Anxiety

Agitation
BPSD Symptom Spectrum\textsuperscript{8,9}

**Behavioral**
- Physical
  - General restlessness
  - Wandering/pacing
  - Hitting/scratching/biting
  - Throwing things
  - Social Inappropriateness
  - Physical Sexual Advances
- Verbal
  - Screaming
  - Cursing
  - Temper outbursts
  - Verbal sexual advances

**Psychological**
- Depression/Anxiety
- Apathy
- Sleep disturbances
- Psychosis
  - Hallucination
  - Delusions
BPSD Based on Dementia Type

- Symptoms appear universal across dementia type
- Exception of hallucinations in LBD and disinhibition in FTD

<table>
<thead>
<tr>
<th>Alzheimer</th>
<th>Vascular</th>
<th>Lewy Body</th>
<th>Fronto-temporal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apathy</td>
<td>Apathy</td>
<td>Visual Hallucinations</td>
<td>Apathy</td>
</tr>
<tr>
<td>Agitation</td>
<td>Depression</td>
<td>Delusions</td>
<td>Disinhibition</td>
</tr>
<tr>
<td>Depression</td>
<td>Delusions</td>
<td>Depression</td>
<td>Personality Changes</td>
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<tr>
<td>Anxiety</td>
<td>Labile</td>
<td>Sleep Disturbance</td>
<td>Obsessions</td>
</tr>
<tr>
<td>Irritability</td>
<td>Anxiety</td>
<td>Aggression</td>
<td>Impulsive</td>
</tr>
</tbody>
</table>

Assessment and Management

• Evaluation of Symptoms
  • Assess risk of harm
  • Identify underlying cause of agitation or aggression

• Initial management strategies
  • Nonpharmacological therapy
  • Treat precipitating medical conditions
    • Pain
    • Sleep issues
    • Depression/Apathy

• Severe symptom management
  • Clinical use of antipsychotics
Evaluation of Symptoms

• Evaluation for BPSD should be done at regular visits
• Assess risk of harm
• New or worsening agitation can pose safety risks
• Safety strategies
  • Additional support for family/caregivers,
    Increased one-on-one supervision
  • Inpatient hospitalization
  • Short-term pharmacotherapy
Evaluation of Symptoms (cont.)

• Identify underlying cause of agitation or aggression
  • Delirium
  • Medications
  • Sensory deficits
  • Cognitive deficits
  • Pain
  • Sleep issues
  • Depression/apathy
Evaluation of Symptoms (cont.)

• Identify underlying cause of agitation or aggression
  • Delirium
  • Medications
  • Sensory deficits
  • Cognitive deficits
  • Pain
  • Sleep issues
  • Depression/apathy
Delirium

• Must be considered with new or sudden worsening of behavior
• Delirium secondary to an underlying condition
  • Dehydration
  • Urinary tract infection
  • Pneumonia
  • Medication toxicity
  • Pain
Delirium (cont.)

• Common cause of abrupt behavioral disturbances in patients with dementia
• Often the first sign of onset of a health problem
• Hallucinations, particularly visual hallucinations, can be a symptom of delirium
• Addressing the cause and/or ruling out delirium should be done before initiating treatment
Clinical Features of Delirium

- Acute onset
- Fluctuating course
- Inattention
- Disorganized thinking
- Cognitive deficits

- Altered level of consciousness
- Perceptual disturbances
- Altered sleep wake cycle
- Emotional disturbances

Delirium is often misdiagnosed as a psychiatric disorder or dementia. Address the underlying cause.
Medications as the Culprit

• Adverse effects is another common precipitant of neurobehavioral disturbances
• Perform a medication evaluation
  • Consider prescription and nonprescription
• Anticholinergic side effects often overlooked
  Common for medications for bladder incontinence and sleep aids
• Worsen cognitive function
Medications as the Culprit (cont.)

Medications to avoid due to worsening cognition**

• Antihistamines
• Antispasmodics
• Benzodiazepines
• Tricyclic antidepressants
• Antipsychotics
• Muscle relaxants
• H2 antagonists
• Nonbenzodiazepine sleep aids

Sensory and Cognitive Deficits

• Vision loss
  • Increased fall risk
  • Exacerbates confusion
  • Hinder communication
  • Contributes to visual disturbances/visual hallucinations

• Hearing loss
  • Exacerbates confusion
  • Hinder communication
  • Contributes to depression and isolation\textsuperscript{12}

• Confusion or misunderstanding
In which scenario is pharmacotherapy most likely necessary?

A. A patient mildly agitated about “someone stealing his belongings” when he misplaces items, although relaxes when he’s reminded where they are.

B. A patient who becomes scared and combative when she “sees people in the trees outside” despite nothing is there.

C. A patient who is incontinent despite making it to the restroom in time.

D. A patient experiencing daytime fatigue.
Treatment

• Initial management strategies
  • Nonpharmacological therapy
  • Treat precipitating medical conditions
    • Pain
    • Sleep Disturbances
    • Depression/Apathy

• Severe symptom management
  • Clinical use of antipsychotics
Nonpharmacological Management
Nonpharmacological Management

• Shown to reduce agitation and anxiety in dementia
• Techniques should be individualized
• Behavioral Interventions
  • Identify/avoid triggers to behavior
  • Determine/anticipate unmet needs
  • Avoid environmental triggers
  • “Person-centered” care
• Caregiver education and training
  • Communication skills training
• Sensory techniques
  • Aromatherapy
  • Music therapy
  • Massage and touch therapy
• Exercise
• Pet therapy
Nonpharmacological Management: Behavioral Intervention

• Ensure a consistent routine and environment
  • Sudden changes can precipitate confusion and subsequently agitation

• Assess for an unmet need (pain, thirst, hunger, etc.)
  • Language and memory deficits can hinder communication of what is needed

• Caregiver education
  • Provide calm, reassuring communication when patients seem anxious
  • Use redirection and distraction techniques

Nonpharmacological Management: Behavioral Intervention (cont.)

• Patient-centered care
  • Providing more individualized focus on the patient during certain activities that may cause discomfort

• Study in nursing home residents analyzing “Person-centered Showering”
  • Usual care control group (showering)
  • “Patient-centered showering” group
  • “Towel bath” group

• Both treatment groups showed decreased agitation, aggression, and discomfort when compared to controls

• Reduction of impersonal, usual care methods which evoke behavioral issues

Nonpharmacological Management: Sensory Techniques

- Aromatherapy
  - Cochrane review found mixed results
  - Lavender and lemon balm are commonly used and safe.\textsuperscript{15}

- Music therapy
  - Several studies indicate music can help with BPSD
    - Music during bath time reduced agitation, and improved affect and cooperation.\textsuperscript{16}
    - Individualized music selection reduces agitation when compared to classical ‘relaxation’ music.\textsuperscript{17}
Nonpharmacological Management: Sensory Techniques (cont.)

• Massage/touch therapy
  • Limited data

• Hand massage was effective for immediate, short term reduction of agitation.\(^{18}\)

• The addition of touch to verbal encouragement to eat increased nutritional intake.\(^{19}\)
Nonpharmacological Management: Other Techniques

• Exercise
  • Can improve physical functioning and symptoms of depression.\(^\text{20}\)

• Animal-Assisted Therapy (pet therapy)\(^\text{21}\)
  • Reduce stress levels
  • Increase physical activity
  • Show beneficial effects on agitation and depression
Treatment

• Initial management strategies
  • Nonpharmacological therapy
    • Treat precipitating medical conditions
      • Pain
      • Sleep Disturbances
      • Depression/Apathy

• Severe symptom management
  • Clinical use of antipsychotics
Assess and Treat Precipitating Medical Conditions

Pain
Sleep Disturbances
Depression/Apathy
JC is a 76yo male with severe AD. He resides in a NH, and staff reports he is typically very pleasant despite his cognitive deficits (verbal communication has diminished, but his ability to communicate nonverbally is well enough to satisfy needs). Recently JC becomes severely agitated when its time to wake for breakfast, and becomes combative with staff who assist helping him out of bed, but this agitation lessens after his morning medications and breakfast. PMH includes hypertension, A-fib, chronic back pain, constipation, and BPH. Which of the following is most appropriate?
A. Inquire about recent staff changes
B. Initiate risperidone 1mg in the morning for aggression
C. Monitor JC throughout the day for signs of worsening pain
D. A and C
E. All of the above are appropriate
Addressing Pain

• Pain assessment through interview and observation
  • Patients with mild to moderate dementia can report pain reliably.\textsuperscript{22}
  • Patients with advanced stages, clinicians rely on caregiver report

• Areas to asses include:\textsuperscript{23}
  • Facial expressions
  • Verbalizations/vocalizations
  • Body movements
  • Changes in interpersonal interactions
  • Changes in activity patterns/routines
  • Mental status changes
## Pain Assessment in Advanced Dementia (PAINAD)²⁴

<table>
<thead>
<tr>
<th>Items*</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative vocalization</td>
<td>None</td>
<td>Occasional moan or groan. Low-level speech with a negative or disapproving quality.</td>
<td>Repeated troubled calling out. Loud moaning or groaning. Crying.</td>
<td></td>
</tr>
<tr>
<td>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>
<td></td>
</tr>
</tbody>
</table>