



Nonpharmacologic Interventions for NPS

Overview

Most patients with Alzheimer's disease (AD) are older (>65 years) and already undergoing the normal gradual sensory declines of aging.¹

They may have different sleep patterns, different eating habits or exercise abilities, or poorer hearing or eyesight. They may also be taking medications for various illnesses.

Superimposing AD on top of normal changes of aging only complicates and compounds these issues.

It is helpful to first identify and normalize the patient's changes, and then to discuss how AD may have exacerbated them.

- Neuropsychiatric symptoms (NPS) AKA Behavioral and Psychological Symptoms of Dementia (BPSD) = heterogeneous group of noncognitive symptoms of AD:
 - Primary NPS: apathy, agitation or aggression, anxiety, depression, and psychosis (delusions and hallucinations)
 - Additional NPS: disinhibition, sleep problems, motor disturbances, appetite/eating problems
- Nearly every patient with Alzheimer's disease will experience at least one NPS.
- Patients do not necessarily experience every symptom listed.
- Some patients will experience NPS as their initial symptoms of AD, even prior to demonstrating cognitive and memory impairments.
- NPS Risks: substantial morbidity and mortality, including worsening cognition, faster progression to more severe stages of dementia, faster need for long-term care placements, greater care partner* burdens and stress, and increased risks for the patient for complications such as falls, fractures, and other reasons for emergency department visits.¹⁻⁵

Managing NPS in Patients with AD: Background

- First: rule out other treatable causes for the symptoms
- All available clinical practice guidelines and best practice recommendations identify nonpharmacologic interventions as first-line treatments in light of the potential risks of many pharmacologic therapies.^{4,6} The following organizations' practice guidelines list nonpharmacologic interventions as first line:
 - American Association for Geriatric Psychiatry (AAGP)
 - Alzheimer's Association, American Geriatrics Society (AGS)
 - American Psychiatric Association (APA)

- Detroit Expert Panel on the Assessment and Management of NPS of Dementia
- National Institute for Health and Care Excellence (NICE)
- Implementing nonpharmacologic interventions might diminish the need for medications.
- Many nonpharmacological interventions aim to provide structure and consistency to the patient's day by establishing good sleep hygiene and sleep schedules, scheduling meals, maintaining hydration, and maintaining a familiar environment.
- Clinicians can work with the patient and/or care partners to help implement these suggestions.

Nonpharmacologic Interventions for Specific NPS

SLEEP

- Normal aging involves difficulties in maintaining sleep, early morning awakenings, and more daytime somnolence.
- These changes can be particularly problematic for the patient with AD, causing increased confusion.
- Inquire about the patient's current typical nocturnal sleep habits.
 - Does the patient wake nightly to urinate?
 - Is the patient able to easily fall asleep?
 - Is the patient able to fall back to sleep?
 - Did the patient previously fall asleep watching TV, and now is unable to fall asleep?
- Recommended interventions:⁷
 - Limit daytime naps, no naps after 1 p.m.
 - Help the patient develop better sleep hygiene:
 - Establish a bedtime routine.
 - Establish a realistic time for the patient to go to bed and to wake up.
 - Minimize or eliminate nighttime noise and light exposures.
 - Keep the room at an optimal temperature.
 - Identify and diminish any other nighttime disruptions such as cellphones or tablets.
 - Encourage patients to exercise during the day for 30 minutes, including walking outdoors.
 - Encourage patients to limit their consumption of caffeine or tea
- Limit alcohol intake, especially prior to bedtime—no more “nightcaps.”
 - Alcohol can affect sleep quality.
 - The effect of alcohol becomes more pronounced with age.
 - Alcohol can interfere with some of the effects of patients' medications.
 - Alcohol can impair hydration and driving ability.
 - Have an honest and objective conversation with their patients about their alcohol use, inquiring if they drink, what, how often, and how much.
 - Note that the same amount of liquor during younger years has a greater impact with age—which is further compounded by a diagnosis of AD.

APPETITE AND HYDRATION

- Overview
 - People with AD may lose their appetite or forget to eat and drink, leading to weight loss, muscle loss, and dehydration.
 - They may also lose their sense of taste.
 - Patients with AD may have dental issues or pain causing them to refrain from eating.
 - Medications can affect appetite.
 - People's food preferences and their desired amounts of food may change over time.
- Interventions
 - Provide small portions, even finger foods, of nutritional food throughout the day.
 - Provide various kinds of liquids all day (e.g. water, decaffeinated teas, milk, smoothies).
 - Schedule meals.
 - Provide (nutritional) snacks.
 - Review what patients eat to ensure they are getting sufficient amounts of fruits and vegetables, protein, and carbohydrates.
 - Ask patients what they drink throughout the day.
 - Explain that many drinks, such as caffeine and alcohol, can be dehydrating.
 - Explain that caffeine is in many sodas, energy “boosters” and other drinks, in addition to coffees and teas—and may contribute to sleep problems.
 - For patients who are unable, or don't like, to drink water, recommend alternative:
 - Dilute flavored drinks, such as Gatorade, in a 1:4 ratio (Gatorade:water) to limit the sugar content.
 - Inform patients that chemicals in “sugar free” drinks might be detrimental to their kidney health.⁸

AGITATION AND AGGRESSION

Agitation and aggression are among the most challenging and distressing of all NPS.⁹

- Agitation can present as restlessness, motor disturbances (e.g. pacing), and emotional distress.¹⁰
 - It can occur early or later in the disease process.
 - Often results from the progressive cognitive impairment
 - Can be associated with environmental triggers: overstimulation, sundowning, and other frustrations
- Aggression can manifest:
 - Verbally: shouting, cursing, and name-calling,
 - Physically: pushing, biting, pinching, hitting, punching, and scratching

- With disinhibited sexual activities¹¹
- It is always better to find ways to **prevent** agitation and aggression than to try to manage it. This entails identifying possible triggers for the behaviors:
 - Do they always occur at the same time?
 - Do they occur in new (likely stressful) situations? Are they in response to a specific person, activity (bathing, eating, taking a walk), or smell (food, perfume, cigarette smoke)?
 - Is the patient frustrated over not being able to make his/her desires/needs known?
 - Is the patient trying to bring attention to an issue that upsets them, but they aren't able to make their needs or concerns known verbally?
 - Does the patient have hearing or visual impairments?
 - Make accommodations for hearing issues: speak slowly and clearly, and enunciate words.
 - Ensure the patient can see and read whatever you are giving them to sign.
- Nonpharmacologic Interventions:
 - Try to identify the source(s) of the agitation. Any alterations to the patient's routine are stressful and can lead to agitative or aggressive behaviors. For example:
 - Moving furniture around
 - Introducing new foods
 - Introducing new people
 - Introducing new activities
 - Maintain the structured routine and environment to minimize outbursts.
 - Recommendations:
 - Utilize distraction techniques to prevent outbursts.
 - Redirect the patient away from the triggering event.
 - Engage the patient in appropriate physical activity or exercise.
 - If possible: music therapy, aromatherapy, and pet therapy
 - If non-physically aggressive NPS: therapeutic touch may be helpful but **is not appropriate** for physically aggressive behaviors.
 - Instruct care partners to **never engage or argue** with the patient to avoid escalating the behaviors, and to never take what is said or done personally.^{1,9-11}
 - If the patient's behaviors become a risk to the patient or to others, it is often necessary to involve emergency services.

ANXIETY AND DEPRESSION

Anxiety and depression are very common and are often misdiagnosed as somnolence or fatigue. Patients may complain of boredom, sleeping a lot during the day, not having the energy to go out as often as they used to.

- Clinicians can ask about the patient's normal daily routine.
 - Ask about the kinds of activities they like to do on a regular basis.

- Has this changed for them over the recent past?
- If so, why do they think it has changed?
- If the patient appears to have anxiety or depression, provide screener scales (eg PHQ2 of PHQ9 for depression or HAM or GAD7 for anxiety).
- Identify triggers leading to anxiety.
- Nonpharmacologic measures are preferred.
 - Reassurance and support may help with anxiety and prevent progression to agitation or aggression.
 - Pharmacologic interventions (off-label) may be necessary if:
 - Anxiety/depression is severe
 - Behavioral interventions are ineffective
 - These were pre-existing conditions prior to the diagnosis of AD¹⁰

PSYCHOTIC BEHAVIORS

- About 50% of patients with AD will experience psychotic symptoms of delusions or hallucinations.
- Up to 1/3 will develop psychosis at some point during their disease process.^{12,13}
- Nonpharmacologic interventions are recommended as first-line treatment (such as those discussed for agitation/aggression) but are rarely effective as monotherapy.
- Currently, there are no pharmacologic treatments that have been approved for the management of psychosis in dementia.
- All antipsychotic agents have a boxed warning against use in elderly patients with dementia. If antipsychotic agents must be prescribed, it is off-label after other nonpharmacologic treatments have failed.

*care partner: We have chosen to use the term “care partner” because it implies a more collaborative and intimate relationship between the patient receiving the care and the person(s) providing the care. It refers to the person who either lives with the patient or sees them ≥ 1 -2X/week and is a ‘softer’ term than ‘caregiver.’

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Resource

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