Alzheimer’s Disease Staging Issues

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Dementia

• A progressive decline in 2 or more cognitive domains that is severe enough to interfere with everyday activities
  • memory (amnesia)
  • use of language (aphasia)
  • visual-spatial function (perceptual confusion)
  • recognition (agnosia)
  • motor coordination (apraxia)
  • sequential tasks (executive dysfunction)

• Gradual onset and cognitive decline ≥ 1 year
• No medical or psychiatric explanation
The Human Brain

- Frontal Lobe
- Parietal Lobe
- Hippocampus
- Occipital Lobe
- Amygdala
- Temporal Lobe
Alzheimer’s Disease

- Early disease affects temporal lobe areas
- Memory, learning, language
- Progressively affects multiple brain areas
- Frontal lobe = executive dysfunction, behavioral symptoms, judgment
- Parietal lobe = visuospatial orientation, agnosia, apraxia
- Basal ganglia = walking, movement
- Brainstem = swallowing, breathing
Alzheimer’s Disease

• Neurotransmitter changes
• Dopamine excess can lead to psychosis; depletion leads to parkinsonism
• Serotonin excess can lead to depression, apathy, withdrawal
• Acetylcholine depletion leads to poorer memory, cognitive function
• Glutamate excess leads to neuron cell death
Staging AD

Mild stage (2 - 4 years)

- Symptoms mild - some IADLs maintained
- Difficulty holding onto new information
- Subtle personality & behavioral changes
- Impaired insight regarding memory impairment
- Decreased concentration, judgment, problem solving skills
Staging AD

Moderate stage (2 - 8 years)
- Progressive need for help
- Ends with dependency for basic ADLs

Severe stage (1 - 3 years)
- Nursing home care / 24 hour nursing care
- Lives within the present only
- Still ambulatory
- Incontinent
Staging AD

Profound stage (1 year)

- Frequent incontinence
- Less verbal output
- Loss of independent ambulation
- Feeds with assistance
- Frequent ER visits
- Albumin < 2.5 or decreased PO intake
Staging AD

Terminal stage (6 months)
- Inability to walk or sit up without assistance
- Inability to smile or hold head up
- >10% body weight loss
- Aspiration pneumonia, stage 2 pressure ulcers, urinary tract infection
### Alzheimer’s Disease Symptomatology Over Time

<table>
<thead>
<tr>
<th></th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
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</thead>
<tbody>
<tr>
<td><strong>Function</strong></td>
<td>IADL independent</td>
<td>IADL dependent</td>
<td>IADL dependent</td>
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<tr>
<td></td>
<td>ADL independent</td>
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<td>ADL dependent</td>
</tr>
<tr>
<td><strong>Cognition</strong></td>
<td>-Difficulty learning</td>
<td>-Substantial memory loss</td>
<td>-Fragmented memory</td>
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<tr>
<td></td>
<td>-Difficulty with time and word finding</td>
<td>-Disoriented</td>
<td>-Severe language</td>
</tr>
<tr>
<td></td>
<td>-Mild judgment impairment</td>
<td>-Impaired judgment</td>
<td>-Short attention</td>
</tr>
<tr>
<td></td>
<td>-MMSE &gt;19</td>
<td>-Decreased attention</td>
<td>-MMSE &lt;12</td>
</tr>
<tr>
<td><strong>Behavior</strong></td>
<td>-Mild personality changes</td>
<td>-Psychosis</td>
<td>-Impulsivity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Wandering</td>
<td>-Vocalizations</td>
</tr>
</tbody>
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Adapted from Cotter VT (2002)
## Stage-Based Interventions: Patient

<table>
<thead>
<tr>
<th>Mild</th>
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<tbody>
<tr>
<td>- Info re-dementia, treatment</td>
<td>- Adult day program</td>
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</tr>
<tr>
<td>- Early stage support grp</td>
<td>- 24 hr supervision</td>
<td>- 24 hr assistance</td>
</tr>
<tr>
<td>- Discussion re-interdependence</td>
<td>- Structured environment</td>
<td>- Adequate nutrition, hydration, mobility,</td>
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<tr>
<td>on CG &amp; others</td>
<td>- Supportive nonverbal communication</td>
<td>pain, behavior interventions</td>
</tr>
<tr>
<td>- Activities to promote well being</td>
<td>- Safe Return</td>
<td>- Comfort care</td>
</tr>
<tr>
<td>- AD, POA</td>
<td></td>
<td>- Consider artificial nutrition, hydration</td>
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</tbody>
</table>
# Stage-Based Interventions: Caregiver

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<tbody>
<tr>
<td>- Info re-dementia, treatment, community resources</td>
<td>- Share CG tasks with others</td>
<td>- Educate re-palliative care approaches, ADL care, prevention of hospitalization</td>
</tr>
<tr>
<td>- Learn CG role</td>
<td>- Regular respite</td>
<td>- Peer support</td>
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<tr>
<td>- Peer support</td>
<td>- Educate re-communication, behavior</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Info re-LTC options</td>
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</tbody>
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