Strategic Supporting Partner

مدينة الملك عبدالعزيز للعلوم والتقنية KACST

2-4 Jumada II 1441 / 27-29 January 2020
Conference Hall – KACST HQ
Riyadh, Saudi Arabia

Organized by

الجمعية السعودية الخيرية لمرض الزهايمر
SAUDI ALZHEIMER'S DISEASE ASSOCIATION

Neuropsychological Assessment of Alzheimer's Disease

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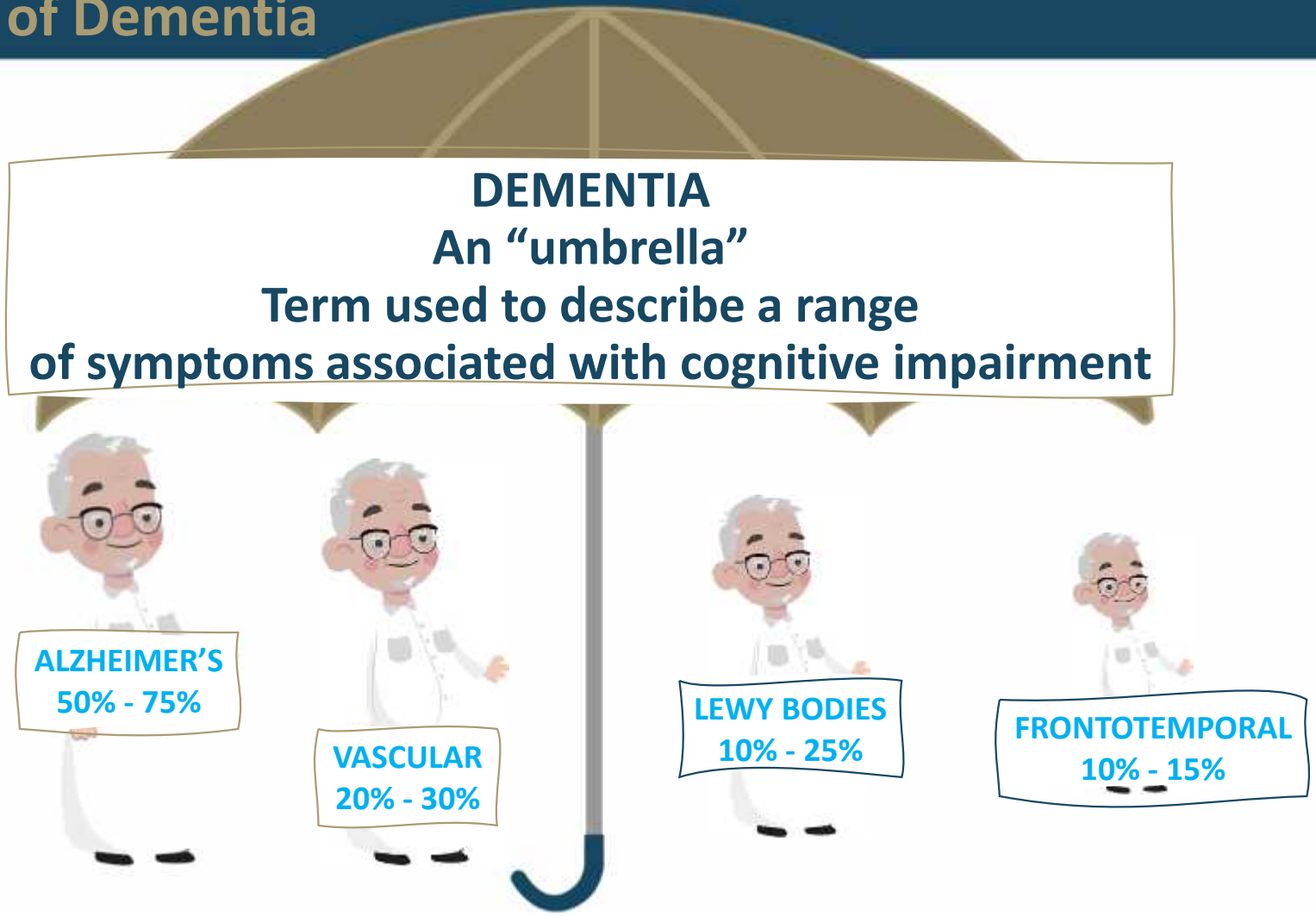
Introduction

Types of Dementia



Symptoms of Alzheimer's Disease (AD)

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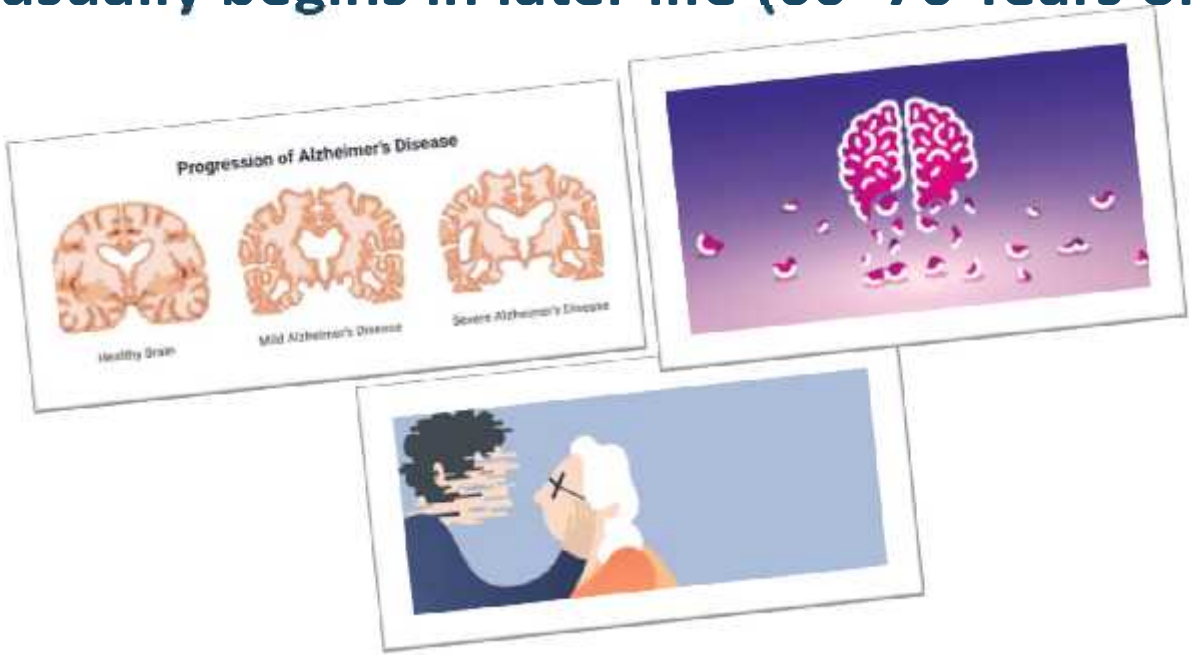
The primary clinical manifestation of AD is a progressive global dementia syndrome that usually begins in later life (60–70 Years old).



Symptoms of Alzheimer's Disease (AD)

These cognitive deficits and the decline in everyday function are the core features of the AD dementia syndrome and are the focus of clinical assessment of the disease.

Symptoms of Alzheimer's Disease (AD)

Mood changes & psychosis:

- Expertise estimate that 20 to 40 % of patients with AD are clinically diagnosed with significant Depression.

- Various studies have found that 40 to 60 % of patients with AD suffer from Psychotic symptoms including hallucinations & delusions. Individuals may become aggressive and difficult to manage.

Symptoms of Alzheimer's Disease (AD)

Personality:

Mild personality changes, such as less spontaneously or a sense of apathy & to withdraw from social interactions, may occur in early stages of the illness.

What is Neuropsychology?

Neuropsychology

Is the scientific study of the relation between brain functioning and how a person thinks, feels and acts.

It is concerned with understanding cognition, emotions and behaviours not only in the context of normal central nervous system development across the lifespan, but also with respect to compromised functioning that results from disease, disorder, and injuries.

Neuropsychological Assessment

An evaluation that involves the integration of multiple sources of information about a patient, including data collected from an interview, collateral information and an individual's performance on standardised psychometric measures.

Neuropsychological Assessment

Based on the data from a neuropsychological evaluation, recommendations can be detailed to guide treatment and management decisions.

For example, confirmation of dementia or a depressive disorder can help clarify the most appropriate treatment (medication, psychotherapy, behavioural management, and or referral to other professionals).

Neuropsychological Assessment

When cognitive problems are found on examination, they may highlight the need to address safety issues at home (risk of forgetting stove burners on, forget to take medication).

The need to increase support and structure (home care, hired assistance).

When to refer to Neuropsychology?

When to refer to Neuropsychology?

Before referring to neuropsychology, rule out medical causes that might account for a patient's cognitive symptoms.

If medical causes can't be ruled out completely, referrals should at least be delayed until the individual's is medically stable (i.e., no infections, untreated conditions, intoxication/ withdrawal delirium or recent medication changes).

Neuropsychological Assessment in AD

Neuropsychological Assessment in AD

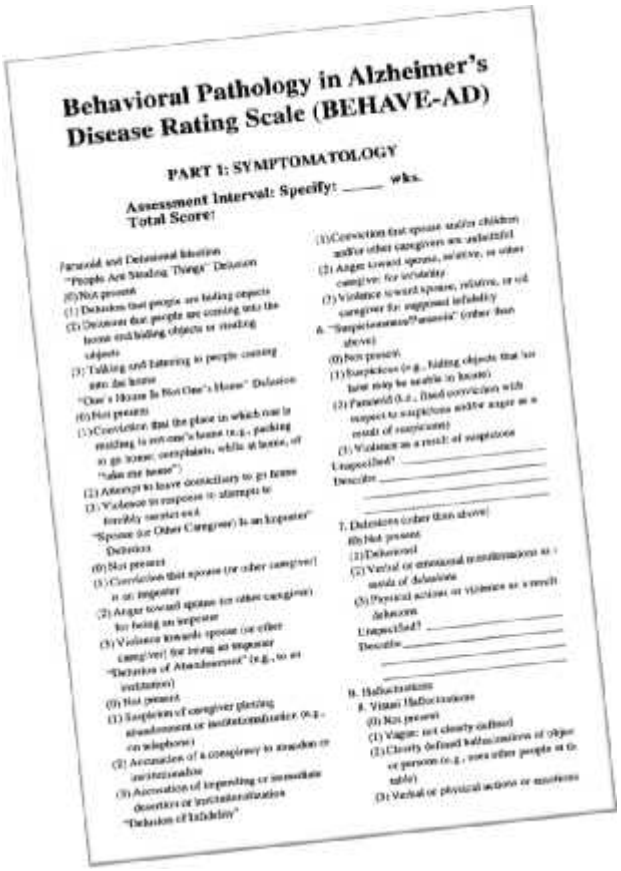
ADAS-Cog (Alzheimer's Disease Assessment Scale-Cognitive):

- This is an 11-part test that takes 30 minutes to complete and is considered more thorough than the MMSE screening tool.
- The ADAS-Cog focuses on attention, orientation, language, executive functioning, and memory skills.

Neuropsychological Assessment in AD

Behavioural Pathology in Alzheimer's Disease Rating Scale (BEHAVE-AD):

- This test provides a global rating of behavioural symptoms such as verbal aggression, physical aggression, and hyperactivity.
- In addition to diagnosis, the scale is often used when clinicians want to determine how well medications are working to manage someone's behavioural symptoms.



Behavioral Pathology in Alzheimer's Disease Rating Scale (BEHAVE-AD)

PART 1: SYMPTOMATOLOGY

Assessment Interval: Specify: _____ wks.
Total Score:

Neuropsychological Assessment in AD

CANTAB (Cambridge Neuropsychological Test Automated Battery):

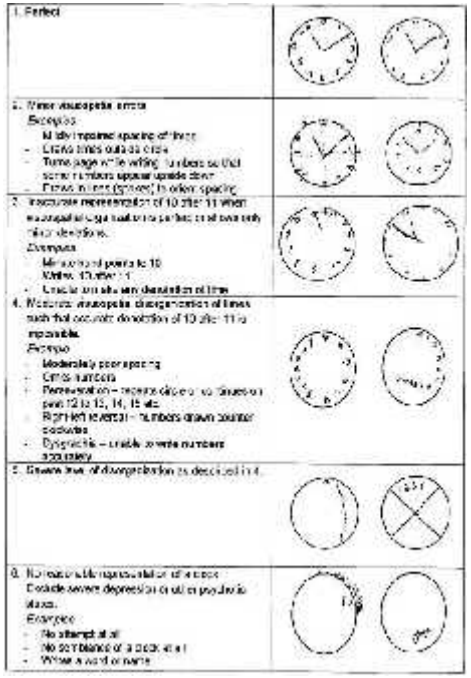
- This test includes 13 interrelated tests of memory, attention, and executive functioning. The battery is administered through a computer by using a touch-sensitive screen.

- Research has shown the battery to be largely unbiased in regard to language and culture, as well as quite sensitive to the early signs of Alzheimer's Disease.

Neuropsychological Assessment in AD

Clock Drawing Test:

- Often used in combination with other neuropsychological tests.
- It assesses visual-spatial impairment.
- Testes are asked to draw the face of a clock, including all of the numbers. They are then asked to draw clock hands which show a certain time (e.g., "10 minutes after 11").



Neuropsychological Assessment in AD

Cognistat (Neurobehavioral Cognitive Status Examination):

This test assesses intellectual functioning in five areas:

- **language, construction (the ability to copy or assemble items in a two- or three-dimensional space), memory, calculations, and reasoning/judgment.**

- **The test takes approximately 10 minutes when people show no cognitive impairment; for those who are cognitively impaired, the test can take up to 20-30 minutes.**

Neuropsychological Assessment in AD

Dementia Rating Scale - 2 (DRS-2):

- This is a 15-20 minute measure of cognitive impairment, which yields scores in five areas: attention, initiation/ perseveration, construction, conceptualization (interpreting what is seen, heard, etc., into an idea or a conclusion), and memory.

Neuropsychological Assessment in AD

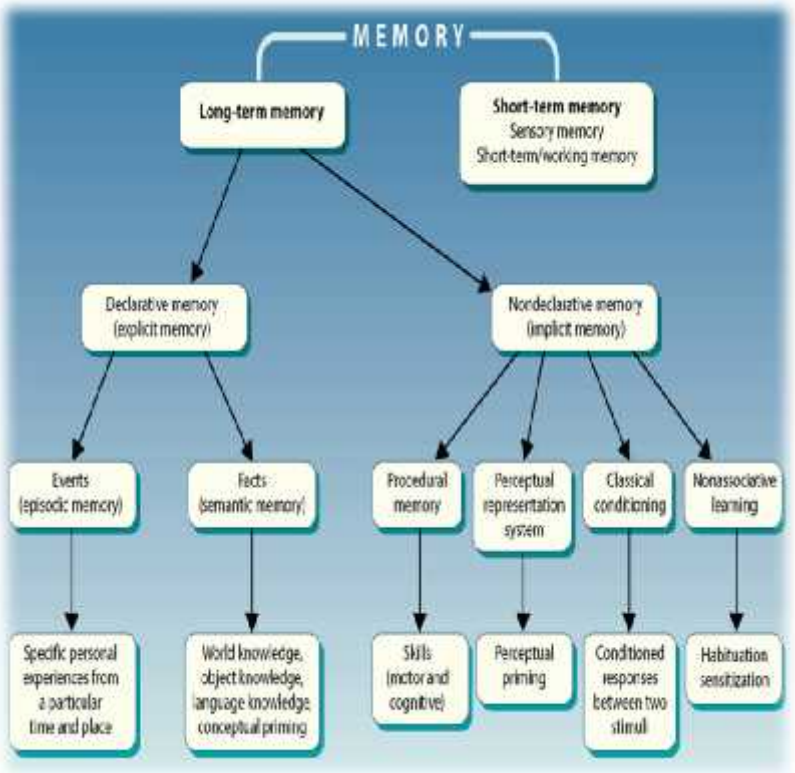
Neuropsychological studies showed that cognitive deficits associated with AD are distinct from age-associated cognitive decline.

Quantitative and qualitative differences are apparent across many cognitive domains, but are especially obvious in episodic memory (particularly delayed recall), semantic knowledge, and some aspects of executive functions.

Neuropsychological Assessment in AD

In AD, evidence suggests that the earliest changes occur in medial temporal lobe.

This is consistent with a wealth of neuropsychological evidence showing that episodic memory impairment is usually the earliest and most salient aspect of the AD dementia syndrome.



How can the AD worsen life?

How can the AD worsen life?

- The decline in cognitive function influence daily living activities, and the ability of the patients to live alone.

- They become insecure and on the top of those cognitive changes, psychological disturbances might occur independently or as a result of feeling not in control.

How can the AD worsen life?

- As the disease progress, families experience increasing of anxiety & pain because of the unsettling changes in a loved one.
- The prevalence of reactive depression among family members is disturbingly high.
- However, family support and education, are one of the most important aspects of the medical management in improving the quality of AD patients life.

Non medical treatment

Non medical treatment

Neuropsychological rehabilitation:

- Variety of strategies to help patients to cope with deficits caused by neurodegenerative disease such as AD.

For example:

- Memory training programs.
- language ability training.
- Developing compensatory strategies (for daily living deficits), associated with social interaction.

Non medical treatment

- Individuals and group sessions can help patients to compensate for their difficulties by either using the residual skills, or finding alternative ways to achieve a goal, or through a combination as in patients or out patients clinics.

Non medical treatment

- **Expert specialist from other areas such as speech therapist must be involved in rehabilitation programs for language rehabilitation.**

- **Occupational therapists could make a significant improvement in training those patients to cope with their sensory difficulties in daily life challenges.**

The role of family & caregivers

The role of family & caregivers

- Provide the patient with a predictable routine (i.e., exercise, meals, and bedtime should be routine and punctual).
- Before performing all procedures and activities, explain them to the patient in simple language.
- Use calendars, clocks, labels, and newspapers for orientation to time.

The role of family & caregivers

- Use color-coded or graphic labels (i.e., on closets, table service, drawers) as cues for orientation in the home environment.

- Provide a safe environment (i.e., no sharp- edged furniture, no slippery floors or throw rugs, no obstructive electric cards).

The role of family & caregivers

- **Provide doors and gates with safety locks.**
- **Use lighting to reduce confusion and restlessness at night.**

The role of family & caregivers

- Install grab bars by the toilet and in the shower.

- Reduce excess stimulation and outings to crowded places (overexposure to environmental stimuli can lead to agitation and disorientation).

The role of family & caregivers

- Allow the patient to dress in his or her own clothing and keep possessions.
- Consider using a day care program for patients with AD.
- Register the patient in the Alzheimer's Association Safe Return Program.

Conclusion & Recommendations

Conclusion & Recommendations

- AD is the exception rather the rule, in old age.
- Diagnosing Alzheimer's is a complex process because the physician (or team of health care professionals) has a great deal of information to sort through.
- If a diagnosis of Alzheimer's is made, the next step is to then begin treating the disease and symptoms.
- There is no cure for AD. However, there are some treatments and approaches that can sometimes improve symptoms and/or quality of life.

Conclusion & Recommendations

- The symptoms of AD is usually very slow & gradual. Therefore, it is essential for suspicious changes to be thoroughly evaluated before they become inappropriately labelled AD.

- The early identification of the disease is essential for better treatment results since there are more preserved cognitive functions to work with in early stages.

Conclusion & Recommendations

- In treatment for individuals with AD & related dementias have addressed a variety of goals, including improving cognitive status, delaying the onset of more severe symptoms, maximizing day to day functioning, and reducing behavioural problems such us depression and agitation.

Conclusion & Recommendations

- Finally, every human being deserve to experience a satisfying quality of life with the minimum functions he/ she has.

- It is the duty of health practitioners, family members, care givers, government and the society to provide people with chronic disease, disability, mental disorders with the best medical, psychological and social care.

Thank you…