

Understanding Dementia

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Dementia

- Recognized since ancient times as consequence of aging
- Today it is a major public health concern
- Approximately 5.4 million people in US with Alzheimer's Disease
- If no cure, 14 million will be affected by 2030



Alzheimer's Disease

- ▶ Statistics – 5.4 million Americans
 - 2/3 of those with the disease are women
 - African Americans are twice as likely to develop Alzheimer's disease
 - Hispanic individuals are 1½ times more likely to develop the disease

2011 Alzheimer's Diseases Facts and Figures

Alzheimer's Disease

- ▶ Most prevalent kind of dementia (60 – 80% of all cases)
- ▶ Although there is an increased incidence with age, it is not consequential to the aging process
 - 13 % population 65 years of age and older
 - Nearly half of the individuals (43%) over age 85

2011 Alzheimer's Diseases Facts and Figures

Costs of Dementia

- In 2010, 14.9 million family members and friends provided 17 billion hours of unpaid care to those with dementia.
- Economic value of unpaid care was \$202.6 billion in 2010.
- More than 60% of caregivers rate the emotional stress of caregiving as high or very high – over 30% report symptoms of depression.



2011 Alzheimer's Diseases Facts and Figures

Dementia

- ▶ Not a disease, but a broader set of symptoms that accompanies certain diseases (Alzheimer's Association)
- ▶ Irreversible chronic brain failure
 - Structural damage to the brain
 - Loss of mental abilities
 - Involves memory, reasoning, learning and judgment

Dementia DSM-IVR (Diagnostic and Statistical Manual of Mental Disorders, 4th Edition)

- ▶ Impairment of the short and long-term memory (Must include a decline in memory) and at least one of below:
- ▶ Impairment of one of the following:
 - Impaired abstract reasoning
 - Impaired judgment
 - Aphasia (language disturbance)
 - Apraxia (action disturbance)
 - Agnosia (recognition disturbance)
 - Personality change

Dementia

- ▶ The decline must be severe enough to interfere with daily life:
 - Disturbance of work and /or social functioning
 - Not occurring only during a delirium
 - Evidence for or presumption of organic etiologic factor

Causes of Dementia

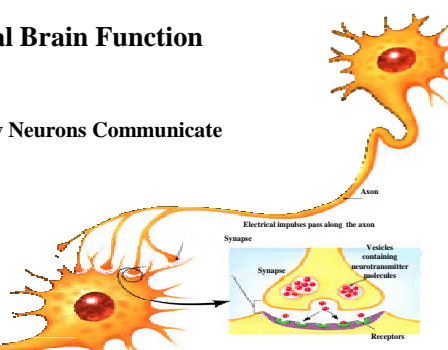
- ▶ Alzheimer's Disease
- ▶ Vascular or Multi-infarct Dementia - strokes, mini-strokes, TIA's
- ▶ Lewy Body Disease
- ▶ Pick's Disease
- ▶ Jacob-Creutzfeldt Disease
- ▶ Parkinson's Disease
- ▶ Substance abuse

Alzheimer's Disease

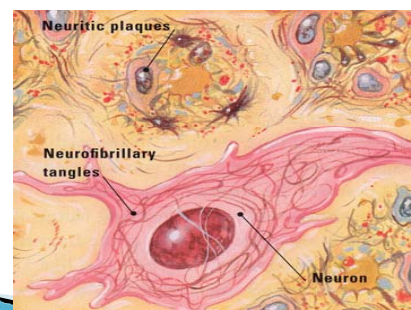
- ▶ Slow and progressive, varies day to day
- ▶ Course of the disease is gradual 8 -10 years
- ▶ Causes?
- ▶ Diagnosis is one of inclusion
- ▶ Presence of neurofibrillary tangles and senile plaques
- ▶ Assessments make sure there are no other psychiatric illnesses or medical diseases causing the cognitive problems

Normal Brain Function

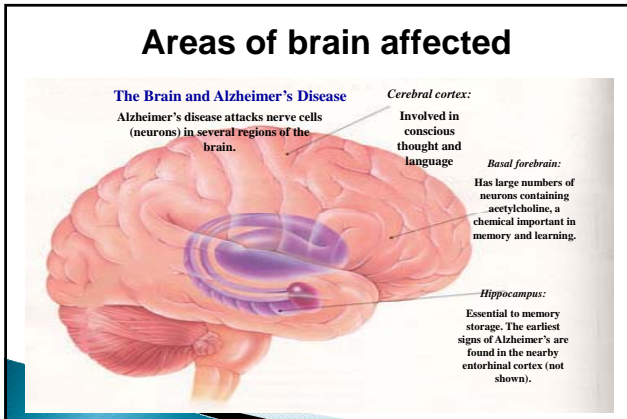
How Neurons Communicate



Cellular Changes in AD



Areas of brain affected



Alzheimer's Disease: Complex Disorder

- ▶ Genetics
- ▶ Aging
- ▶ Amyloid deposits
- ▶ Inflammation
- ▶ Plaques and tangles
- ▶ Neuronal damage and loss
- ▶ Neurochemical changes
- ▶ Dementia

New Criteria for Alzheimer's Disease

- ▶ Alzheimer's Association and the National Institute on Aging (NIA) of the National Institutes of Health (NIH)
- ▶ Workgroup developed four articles including ready-to-use clinical diagnostic criteria for Alzheimer's disease, dementia and mild cognitive impairment (MCI) due to Alzheimer's

http://www.alz.org/news_and_events_diagnostic_criteria.asp

New Criteria for Alzheimer's Disease

"The National Institute on Aging/Alzheimer's Association Diagnostic Guidelines for Alzheimer's Disease" expand the definition of Alzheimer's to include two new phases of the disease:

- (1) pre-symptomatic and
- (2) mildly symptomatic but pre-dementia, along with
- (3) dementia caused by Alzheimer's

http://www.alz.org/news_and_events_diagnostic_criteria.asp

New Criteria for Alzheimer's Disease

- ▶ Will assist with:
 - improving current diagnosis
 - bringing the field closer to earlier detection and treatment
 - leading to effective disease-modifying therapies

http://www.alz.org/news_and_events_diagnostic_criteria.asp

Vascular or Multi-infarct Dementia

- ▶ The second most common type of dementia
- ▶ Affects more men than women, ages 55 – 75
- ▶ Caused by a series of small strokes
- ▶ Different pattern than Alzheimer's Disease

Vascular or Multi-infarct Dementia

- ▶ Risk factors:
 - Diabetes
 - Hardening of the arteries ([atherosclerosis](#))
 - High blood pressure ([hypertension](#))
 - Smoking
 - High Cholesterol
 - Heavy alcohol use
 - Stroke

Lewy Body Dementia

- ▶ One of the most common types of dementias
- ▶ Lewy body dementia exists either in pure form, or in conjunction with other brain changes, including those typically seen in Alzheimer's disease and Parkinson's disease.
- ▶ Presents as “cognitive decline” plus three defining characteristics

Frontal Temporal Dementias

- ▶ Uncommon form of dementia.
- ▶ Second or third most common cause of dementia in individuals under age 65.
- ▶ Damage to the frontal lobe and/or the temporal parts of the brain.
- ▶ A more rapid onset than in Alzheimer's disease.
- ▶ May experience language difficulties, such as mutism, difficulty with word finding, or aphasias.

Frontal Temporal Dementias

- ▶ Symptoms are more changes in personality and behavior:
 - Lack insight, and lose of the ability to empathize with others, making them appear selfish and unfeeling
 - Behave inappropriately
 - Lose their inhibitions
 - Be easily distracted
 - Develop compulsive rituals
 - Become aggressive

Creutzfeldt-Jakob Disease

- ▶ Rare, fatal rapid disease
- ▶ Death within 6 – 12 months of the diagnosis
- ▶ Thought to be caused by prions that change proteins into infectious proteins that cause brain death

Behavioral and Psychological Symptoms of Dementia

- Symptoms of Disturbed Perception, Thought Content, Mood or Behavior that Frequently Occur in Persons with Dementia
- BPSD are Treatable
- BPSD can result in:
 - Suffering
 - Premature Institutionalization
 - Increased Costs of Care
 - Loss of Quality of Life for the person and caregivers

Behavioral and Psychological Symptoms of Dementia

- ▶ **Hallucinations** (Usually Visual)
- ▶ **Delusions**
 - People are Stealing Things
 - Abandonment
 - This is Not my House
 - You are Not my Spouse
 - Infidelity

Behavioral and Psychological Symptoms of Dementia

- ▶ **Misidentifications**
 - People are in the House
 - Talk to Self in the Mirror as if another person
 - People are Not who they are
 - Events on Television

Behavioral and Psychological Symptoms of Dementia

- ▶ **Depressed Mood**
- ▶ **Anxiety**
- ▶ **Apathy**
 - Decreased Social Interaction
 - Decreased Facial Expression
 - Decreased Initiative
 - Decreased Emotional Responsiveness

Behavioral and Psychological Symptoms of Dementia

- ▶ **Wandering**
 - Checking
 - Attempts to Leave
 - Aimless Walking
 - Night-time Walking
 - Trailing
 - Excessive Activity

Behavioral and Psychological Symptoms of Dementia

- ▶ **Verbal Agitation**
 - Negativism
 - Constant Requests for Attention
 - Verbal Bossiness
 - Complaining
 - Relevant Interruptions
 - Irrelevant Interruptions
 - Repetitive Sentences

Behavioral and Psychological Symptoms of Dementia

- ▶ **Verbal Aggression**
 - Screaming
 - Cursing
 - Temper Outbursts

Behavioral and Psychological Symptoms of Dementia

▶ Physical Agitation

- General Restlessness
- Repetitive Mannerisms
- Pacing
- Trying to Get to a Different Place
- Handling Things Inappropriately
- Hiding Things
- Inappropriate Dressing or Undressing

Behavioral and Psychological Symptoms of Dementia

▶ Physical Aggression

- Hitting
- Pushing
- Scratching
- Grabbing Things
- Grabbing People
- Kicking and Biting

Behavioral and Psychological Symptoms of Dementia

▶ Disinhibition

- Poor Insight and Judgment
- Emotionally Labile
- Euphoria
- Impulsive
- Intrusiveness
- Sexual Disinhibition

Medication Interventions for Dementia

- ▶ Antidepressant Medication
- ▶ Antianxiety Medication
- ▶ Antipsychotic Medication
- ▶ Mood Stabilizers
- ▶ Cholinesterase Inhibitors
- ▶ NMDA Receptor Antagonist

Cholinesterase Inhibitors

- ▶ Proposed to Increase Acetylcholine
- ▶ Target
 - Cognitive Symptoms of Alzheimer's Disease
 - May Help BPSD
 - Apathy
 - Delusions and Hallucinations

Cholinesterase Inhibitors

- ▶ Aricept - donepezil
 - Selective, reversible acetylcholinesterase inhibitor
- ▶ Exelon - rivastigmine
 - Dual inhibitor of both acetylcholinesterase and butyrylcholinesterase
- ▶ Razadyne - galantamine
 - Both an acetylcholinesterase inhibitor and a selective booster of nicotine action

NMDA Receptor Antagonist

- ▶ Namenda - Memantine
 - N-methyl-D-aspartate (NMDA) receptor antagonist that protects against glutamate-mediated neurotoxicity.
 - For moderate to severe Alzheimer's disease
 - Slows the progression
 - Start 5 mg po q day. Titrate to 10 mg po BID.
 - Side effects: dizziness, headache, confusion, constipation, incontinence

Dementia Assaults the Person's Identity and Self-Esteem

Delirium

- Delirium is a sudden, severe confusional state with rapid changes in brain function that occur with physical or mental illness
- Fluctuating level of consciousness
- Reversible/ treatable

Delirium

- ▶ Symptoms:
 - Changes in alertness
 - Changes in feeling (sensation) and perception
 - Changes in level of consciousness or awareness
 - Changes in movement
 - Changes in sleep patterns, drowsiness
 - Confusion (disorientation)

Delirium

- ▶ Symptoms:
 - Decrease in short-term memory and recall
 - Disrupted or wandering attention
 - Disorganized thinking
 - Emotional or personality changes
 - Incontinence
 - Psychomotor restlessness

Delirium

- ▶ Causes:
 - Medications
 - Infections
 - Metabolic/ endocrine
 - Vitamin Deficiency
 - Anesthesia
 - Trauma
 - Alcohol or sedative drug withdrawal

Multidisciplinary Approach

- ▶ History and Physical
- ▶ Laboratory tests - CBC with Differential, Thyroid studies, B12, Folate, Chemistry Profile, RPR, UA, Sedimentation Rate
- ▶ Psychiatric Assessment
- ▶ Psychological testing
- ▶ Evaluation of functional abilities
- ▶ Social factors

Behavioral Management is the key in taking care of anyone with a Dementia!

Causes of Behavioral Problems in Older Adults

Psychiatric symptoms are common among individuals who live in nursing homes and other "care facilities", with prevalence rates ranging from 51 percent to 94 percent.

Causes of Behavioral Problems in Older Adults

- ▶ **"Mental Health" Issues**
 - Behavioral and psychological symptoms of dementia
 - Delirium
 - Depressive illness
 - Anxiety
 - Regressive symptoms of psychiatric illness
- ▶ **Personality "issues"**
- ▶ **Institutional causes of problem behaviors**

Three Steps in Identifying Causes of Behaviors

1. Identify and examine the behavior:
 - Could it be related to medication or illness?
 - What was the behavior? Could it be considered harmful?
 - What happened before the behavior?
 - What was the trigger?
 - What happened immediately after the behavior occurred? How did individuals react?

Alzheimer's Association – "How to respond when dementia causes unpredictable behaviors."

Three Steps in Identifying Causes of Behaviors

2. Explore potential solutions:
 - What are the "individuals" needs? Are they being met?
 - Can adapting the surroundings comfort the person?
 - How can you change your reaction or your approach to the behavior? Are you responding in a calm and supportive way?

Alzheimer's Association – "How to respond when dementia causes unpredictable behaviors."

Three Steps in Identifying Causes of Behaviors

3. Explore different responses:

- Did your new response help?
- Do you need to re-evaluate for other potential causes and solutions?
- What could you do differently?

Alzheimer's Association – "How to respond when dementia causes unpredictable behaviors."

Handling Troubling Behaviors

- ▶ Check with the doctor first!
- ▶ We **cannot** change the person
 - Try to accommodate the behavior, not control the behavior.
 - Remember that we **can** change our behavior or the physical environment.

Fact Sheet: Caregiver's Guide to Understanding Dementia Behaviors, Family Caregiver Alliance

Handling Troubling Behaviors

- ▶ Behavior has purpose
- ▶ Behavior is triggered
- ▶ What works today may not work tomorrow
- ▶ Get support from others!

Fact Sheet: Caregiver's Guide to Understanding Dementia Behaviors, Family Caregiver Alliance

Remember Behaviors may be related to:

- ▶ Physical discomfort – illness or medication
- ▶ Overstimulation – loud noises or a "busy" environment
- ▶ Unfamiliar surroundings – new places or the inability to recognize home
- ▶ Complicated tasks – difficulty with activities or chores or even simple requests
- ▶ Frustrating interactions – inability to communicate effectively

Alzheimer's Association – "How to respond when dementia causes unpredictable behaviors."

Communication

10 Keys of Communication

- ▶ Set a positive mood for interaction
- ▶ Get the person's attention
- ▶ State your message clearly
- ▶ Ask simple, answerable questions
- ▶ Listen with your ears, eyes and heart

Fact Sheet: Caregiver's Guide to Understanding Dementia Behaviors, Family Caregiver Alliance

Communication

10 Keys of Communication

- ▶ Break down activities into a series of steps
- ▶ When the going gets tough, distract and redirect
- ▶ Respond with affection and reassurance
- ▶ Remember the good old days
- ▶ Maintain your sense of humor

Fact Sheet: Caregiver's Guide to Understanding Dementia Behaviors, Family Caregiver Alliance

**Behaviors are a form of
Communication!**

**Understanding, flexibility and
creativity are the keys to effective
behavior management!**

Multidisciplinary Needs

- ▶ Social needs for both caregivers and residents.
- ▶ Cognitive difficulties and behavioral manifestations
- ▶ Psychiatric symptoms
- ▶ Complicated medical needs
- ▶ Changing communication and ADL needs
- ▶ Normal age related changes may cause potential iatrogenic illness

Resources

- ▶ Alzheimer's Association – www.alz.org
- ▶ ADEAR – adear@alzheimers.org
- ▶ Family Caregiver Alliance – www.caregiver.org
- ▶ Geriatric Mental Health Foundation –
www.gmhfonline.org
- ▶ Medline Plus – www.medlineplus.gov
- ▶ Pennsylvania Behavioral Health and Aging Coalition –
www.OlderPA.org

**When we ask for a chance to live our
old age in comfort, creativity and
usefulness we ask it not for ourselves
alone, but for you. We are not a
special interest group. We are your
roots. You are our continuity. What we
gain is your inheritance.**

Irene Pauli, "Some Ironies of Aging"