

DEFINITION:

Alzheimer's Disease (AD) is a progressive degenerative disorder of the CNS characterized by progressive, irreversible deterioration of the general intellectual functions such as memory, attention, judgement and intellect. It also changes ones' own personality.

INCIDENCE:

When the disease occurs in people over age 65, it is called Senile Dementia of the Alzheimer's Type (SDAT). When it occurs in people under age 65, it is called Pre-Senile Dementia. More than 50% of the cases are senile type and the pre senile dementia occurs less frequently.

ETIOLOGY:

The specific etiologic origin of AD is unknown. However, genetic factors have been implicated, specifically a defect on chromosome 21. This type of AD is considered of familial form of the disorder. The role of neuro transmitters such as somatostatin, nor epinephrin and dopamin are also under investigation. Increasing age, environmental and metabolic factors also play an important role. Head trauma, lack of education and myocardial infarction have shown to be the risk factors. Some have postulated that albumin intoxication, disordered immune function and viral infection may be the causes of AD.

CLINICAL MANIFESTATIONS:

Memory loss is usually the first sign of AD. Memory deficits are initially subtle and may not suspect a problem until the disease progresses and symptoms become more noticeable. Later the client exhibits unsafe or extremely unusual behaviour. Progression of the disease varies, but the course is one of

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deteriorating cognition and judgement with eventual physical decline and total inability to perform activities of the daily living. Clinical Features may be

ALZHEIMER'S DISEASE

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classified into 3 stages.

Stage-1 (Early Stage 2 to 4 years): 'Forgetfulness, decreased interest in personal affairs, changes in personality and behaviour, Demonstrates vague uncertainty and hesitancy in initiating actions, performs poorly at work.

Stage-2 (Middle stage 2 to 12 years): Progressive memory loss, signs of aphasia, difficulty in following instructions/calculation, irritability, anxiety, wandering, confusion, apraxia, loses way to home, neglects personal hygiene, loses social graces.

Stage-3 (Final stage 1 year): Weight loss, aphasia, disorientation to time, place and person, does not recognize family, incontinence of urine and faeces, motor deficits and even death may occur.

PATHOPHYSIOLOGY:

Structural and chemical changes, cortical atrophy and cellular degeneration; neurofibrillary tangles and neuritic plaques. [Neurofibrillary tangles are a tangled mass of non functioning neurons. and neuritic plaques are deposits of beta amyloid protein, part of a larger protein or amyloid precursor protein (APP) - decreased neurotransmitter; decreased blood supply and decreased glucose metabolism. Chemical changes that occur with AD are related to decrease of Neuro transmitters such as Acetyl choline, nor epinephrine, sero-

tonin and somatostatin.

COMPLICATIONS:

Common complications in the 3rd stage include pneumonia, dehydration, malnutrition, frequent falls, depression, delusions and paranoid reactions.

DIAGNOSTIC MEASURES:

AD is diagnosed by ruling out causes of the client's symptoms. The only definitive method of diagnosis is postmortem examination of brain tissue.

Laboratory and diagnostic tests include:

1. Magnetic Resonance Imaging (MRI) and CT scan of brain demonstrates enlarged Ventricles and sub-arachnoid space.
2. EEG may reveal a slowed pattern in the later stage of this disease.
3. Complete blood count may reflect anaemia from malnutrition.
4. Positron emission tomography (PET) scan shows diminished glucose metabolism in the brain.
5. Psychometric evaluation using the Folstein mini - MSE form.

A new test involves measuring the speed of pupillary dilation in response to tropicamide; an eye medication commonly used to produce mydriasis and cycloplegia.

MANAGEMENT MEDICAL:

Unfortunately there is no specific Medical treatment for AD. However, results of early study showed some success with the drug 'Tetrahydro amino acridine' (THA) in helping to restore cognitive functions. Low doses of antihistamines and antidepressants are also prescribed and administered. Occasionally clients with AD require tranquilizers to manage severe



agitation. However, these medications are to be used cautiously because of their potentially serious side effects.

NURSING INTERVENTIONS:

Since medical management is under research nursing interventions are very important in patients with AD. They include the following points:

- Address the patient by name and face him when initiating interactions
- Maintain eye contact, speak slowly, and distinctly using simple words.
- Be calm and re-assuring; state only one message at a time and allow time to respond.
- Maintain a daily routine for the patient to follow the ADL.
- Do not give too many directions at a time.
- Distract patient's attention when agitated; supervise the patient from getting injured or lost.
- Avoid negative criticism. meet nutritional needs; provide continuity of care.
- Reduce the amount of environmental stimuli.
- Be honest, do not give false reassurances about the future.
- Refrain from physical restraints'
- Provide the family and patient with specific informations about the social services and community resources.
- Arrange occupational and recreational therapies to divert their attention.
- Maintain a reality oriented relationship and environment.
- Develop alternative methods for communication and
- Have patience with AD patients.

Equally important, the care givers need much support - both physical and psychological as the client becomes increasingly dependant.

PROGNOSIS:-

The prognosis of a client with AD is poor with an average life expectancy of 7 years from the time of diagnosis. Death frequently occurs from pneumonia secondary to aspiration.

CONCLUSION:

In conclusion AD is an old age degenerative neurologic disorder which is commonly characterized by gradual loss of cognitive function and disturbance in behaviour and affect. The major symptom, that is observed in these patients is the memory loss which can be seen in their activities of daily living. These patients definitely need a lot of support, encouragement, understanding and empathy. Educating health professionals about AD, its consequences and care is essential at every phase of its progression and in every care setting. As Nurses, let us all begin today to care for our senior citizens with love.

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*Dear Lord we pray
for those who have died of
Alzheimer's disease...*

PEACE

*for those who are now victims of
Alzheimer's disease....*

*DIGNITY AND COMFORT
for the Alzheimer's disease
caregivers....*

*COMPASSION AND PATIENCE
for the Alzheimer's disease families....*

*STRENGTH AND COURAGE
for those who seek the cause, cure....
prevention and treatment of
Alzheimer's disease...*

*YOUR GUIDANCE AND
DIRECTION
for the HOPE YOU have given us...
OUR THANKS.*

AMEN

Al Garfield