Alzheimer's Disease Overview



Eddie Racoubian MD.MSC. Responsible St MARC Laboratory

Alzheimer's disease was first described by a German doctor of psychiatry Dr. Alois Alzheimer, who in 1906 showed it to be a chronic disease where short-term memory loss is the first of its symptoms.

The real cause, although still believed to be mostly genetic, is poorly understood. The usual age it affects its patients is 65 and above, about 6% of the human population. In 2015, this number was 48 million people.

Primary symptoms are usually attributed to ageing or stress. Most commonly, they are short-term memory loss and the inability to acquire new information. Older memories such as language, facts learned early on, daily habits, such as eating are not affected at this stage.

Progressive deterioration hinders independence with the emergence of speech issues (wrong words are used in a sentence), inability to write, long-term memory loss, falling risk; behavioral changes such as irritability, wandering around and geographic loss, and delusions (30%).

Advanced stage shows single word uses, exhaustion, lack of physical motion, and eventually death from usually pressure soars or infection.

Causes

- Genes attribute to 0.1% of the cases. These genes are responsible for increasing amyloid beta-42 proteins in the brain, and these patients have an autosomal dominant (A.D.) hits its patients earlier in life.
- The Amyloid hypothesis says that the buildup of this friends alike.

protein is the only cause of AD. The gene for amyloid is on chromosome 21, and studies have shown that patients with Down's syndrome have earlier onset of AD. However, vaccines that lower amyloid did not improve AD symptoms.

- A third and popular belief is that the blood-brain barrier weakens in some people, letting in heavy &/or toxic metals such as copper, iron, zinc and aluminum. Nothing is proven yet, so don't throw your iron pills or aluminum sandwich foils out vet.

Diagnosis

Diagnosis is usually based on medical history and a clinical checkup. Easy-to-do tests such as re-drawing a geometric shape, remembering numbers, subtracting serially help. Imaging studies also help especially in follow-up scenarios. Blood tests are helpful indirectly, by ruling out other causes of dementia: thyroid, kidney functions, diabetes profile and heavy metals dosages in those with exposure history.

There are some gene tests. These tests are not full-proof and don't prove a lot. Remember, gene-related AD only accounts for 0.1%. Plus we don't know all the genes involved in this disease; new genes are being discovered every day. Such profiling tests also cost >2000\$ per person!

Prevention

This is the best way to avert this disease. Most studies show that "using" your brain during your lifetime will help. Reading books, newspapers, spending time with intellectual games like Sudoku, and having an involved social lifestyle are important. Smoking and pollution have been shown to be causative, whereas a healthy lifestyle, with exercising and eating healthy, averts Alzheimer. Since there is no cure for this disease, prevention of any kind remains the only viable option.

Hopefully, with ongoing research and newer diagnostic tests and treatments, more can be understood about this hereditary pattern. Genetically linked Alzheimer's Disease very debilitating disease, which causes problems not only for the patient, but also for all the relatives and close





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