

Dementia Defines a Group of Disorders

Last month, we discussed the common causes of cognitive impairment in seniors, including not paying attention, impaired hearing, overbearing or overprotective family or caregivers, drug side effects, depression or anxiety, uncontrolled medical problems, nutritional deficiencies and dementia. We emphasized that dementia should be the *last* cause to be considered, not the first. This is a key point because all too often, the lay public and many medical practitioners equate cognitive dysfunction in a senior with dementia -- before a thoughtful and thorough medical evaluation has been conducted.

Dementia is not a medical diagnosis. It is a group of disorders that have three key features in common:

- Loss of two or more prior intellectual abilities
- Persistent deficits
- Functional decline

There are more than 75 known causes of dementia in humans, but the list of commonly encountered causes in seniors is short. It includes Alzheimer's disease, vascular dementia (in all of its varied forms), Parkinson's disease, Lewy body dementia and alcoholic dementia.

ALZHEIMER'S DISEASE is the most common cause of dementia in persons over the age of 65. It is named for the German physician who first described its clinical features at the turn of the 20th century. The hallmark and defining feature of Alzheimer's disease is *progressive cognitive decline*. Early on, most Alzheimer's patients show significant problems in short-term memory, orientation and calculation. As the disease progresses, other intellectual abilities become impaired, such as language, judgment and personality.

By definition, all dementias, including Alzheimer's disease, must involve two or more intellectual abilities. But over time, the progressive nature of Alzheimer's disease *eventually affects all intellectual abilities* — what physicians call “global dysfunction.” Another distinctive feature of Alzheimer's disease is the relative sparing of motor and sensory functions. The disease does not affect a person's ability to use muscles or to feel sensations, such as pain, temperature or taste. This often becomes a major management issue for Alzheimer's patients who, being physically intact but mentally confused, may walk away or “wander.”

Alzheimer's disease causes characteristic changes in the brain but for all practical purposes, these changes are only apparent at autopsy. And while medical researchers have tried for years to identify a specific blood test or imaging study that would allow doctors to confidently diagnose Alzheimer's disease in life, no such test has yet been identified. Therefore, the diagnosis of Alzheimer's disease remains a clinical diagnosis — a diagnosis that can be made only by carefully monitoring the patient's signs and symptoms over time *and* by continuously re-evaluating other possible causes.

VASCULAR DEMENTIA is the name given to the cognitive dysfunction that results from damaged or dead brain cells, which, in turn, was caused by disease or blockage of the blood vessels that feed the brain. Stroke is by far the most common type of vascular dementia. But other types previously thought to be uncommon are now increasingly recognized, largely due to the widespread use of MRI brain scans. For example, “diffuse small vessel disease,” also known

as “Binswanger’s disease,” is now commonly recognized in seniors. This is a disease of the small blood vessels at the base of the brain that causes diffuse damage to brain cells rather than the localized damage characteristic of a stroke. MRI or CT brain scans done for reasons not related to cognitive dysfunction frequently uncover “silent” areas of brain damage, or “infarction.” They are called “silent” because the patient had no apparent cognitive or physical problems attributable to the infarction.

The abnormal movements seen in Parkinson’s disease are familiar to many people, including resting tremor, rigid or “cog wheel” muscle tone and a tendency to lean forward and to fall. However, many patients with long-standing Parkinson’s disease also develop dementia, which can be quite debilitating. Lewy body dementia is a less common cause of dementia that resembles Parkinson’s dementia, but often includes vivid visual hallucinations. Finally, alcoholic dementia can result from years of excessive drinking. It can occur in people from any socio-economic level, from the destitute homeless alcoholic to the most affluent members of society. The common feature is that they drink in excess.

Vascular dementia, like heart attack, is a form of atherosclerosis—a progressive hardening and narrowing of the arteries that reduces their ability to deliver blood, oxygen, and nutrients. So it is not surprising that vascular dementia and heart attack would have the same risk factors: smoking, inactive lifestyle, high blood pressure, high blood cholesterol and poorly controlled diabetes. But medical research over the past decade has revealed something very surprising: these same atherosclerosis risk factors also increase the risk for Alzheimer’s disease. In addition, people with a “silent” infarction on brain scan, indicating atherosclerosis in the arteries of the brain, have a twofold higher risk of developing Alzheimer’s disease than people without such a finding. Some researchers are coming to believe that Alzheimer’s disease is really a variant of vascular dementia.

And here’s another surprise: recent studies have highlighted the importance of diet in the cause and prevention of Alzheimer’s disease. People who eat a diet rich in fresh fruits and vegetables and people who eat wild caught fish at least once each week reduce their risk of developing Alzheimer’s disease by an average of 36 percent. Imagine a drug that could offer that benefit; would you take it?

Next month, we will look at this research in more detail and discuss measures we can all take to reduce our risk of developing dementia.