

## Vascular Dementia (VaD)

### Definition

Vascular dementia (VaD) is considered by some to be the second most common dementing illness after Alzheimer's disease (AD). VaD comprises a group of mixed dementing disorders due to cerebrovascular insufficiency. Consequently, these disorders, may be the result of brain damage from multiple strokes, or infarcts, caused by small clots from heart or neck arteries that clog a branch of a blood vessel in the brain. A stroke means that the blocked blood vessel has deprived an area of brain tissue of essential oxygen and nutrients. The relationship between Alzheimer's disease and vascular dementia is complex, however, recent evidence suggests that small strokes may lead to increased clinical presence of Alzheimer's disease.

### Incidence

The incidence of vascular dementia is slightly higher among men than among women and appears typically in those between 60 to 75 years of age, however the prevalence of VaD rises steeply with age (Mendez & Cummings, 2003). In United States, VaD may disproportionately affect African-Americans (see African-Americans and Alzheimer's Disease: The Silent Epidemic Fact Sheet) and in Japan and other Asian countries, VaD may be even more common than AD. Preventable risk factors are high blood pressure (hypertension), heart disease and diabetes mellitus.

### Clinical Features

The symptoms of vascular dementia depend greatly on where strokes occur in the brain because specific areas of the brain control certain functions. Frequently, one of the earliest strokes gives rise to a neurologic event or deficit that prompts the person or family to seek medical attention. It is at this point when a focused examination may reveal a degree of memory and cognitive impairment that had previously gone unnoticed. The presentation of symptoms may be:

- ◆ memory impairment, an early and cardinal feature, with recent memory most affected
- ◆ language disturbance (aphasia)
- ◆ difficulty walking
- ◆ incontinence
- ◆ impairment in motor skills (a common early symptom)
- ◆ more abrupt loss of intellectual skills
- ◆ emotionally labile (easily moved to tears without warning, or laughs inappropriately)
- ◆ sensory disorders (hallucinations) or thought disorders (delusions)
- ◆ personality and insight are relatively preserved
- ◆ depression

### Disease Course I\_ I\_ step-wise

A person with vascular dementia may often experience a more abrupt loss of intellectual skills as compared to a gradual loss in Alzheimer's disease. The course of vascular dementia frequently progresses in "steps", with the person's abilities remaining steady for a period of time and then declining rapidly. The reason for this variable and "step-wise" course is the underlying cause of the vascular dementia, the strokes. On average, individuals with vascular dementia live several years less after diagnosis than those with Alzheimer's disease--the cause of death often being a heart attack or major stroke.

## **Diagnosis**

As with most dementing illnesses, a definite diagnosis is possible only on autopsy with examination of the brain tissue. However, a probable diagnosis is determined by:

- ◆ dementia, impairment of memory and 2 or more cognitive domains
- ◆ cerebrovascular disease: with focal signs on neurological examination (i.e., hemiparesis, lower facial weakness)
- ◆ evidence of relevant cerebrovascular disease by brain scan imaging (CT or MRI scan)
- ◆ probable association results when there is a temporal (time) relationship between cognitive deficits and cerebrovascular lesions, as an example, abrupt or stepwise deterioration

## **Treatment**

Vascular dementia is neither reversible nor curable, but treatment of underlying conditions, such as high blood pressure, diabetes mellitus, may prevent further progression of the disorder. Treatment of any associated symptoms of depression is also recommended. As with other dementing illnesses, families must ensure the safety and well-being of the affected individual and also adapt to the person's changing cognitive status. The individual will eventually require full time supervision and care, so it is essential that the caregiver and family members seek support along the way. The Alzheimer's Association has many programs to assist families with education, emotional support and care planning throughout the course of a dementing illness. There are formal support services such as home care or adult day programs, and informal support such as friends, neighbors or church members all supports essential for caregiver survival during very challenging caregiving experience.

For more information about programs and services for families or professionals, please call the Alzheimer's Association of Greater Cincinnati at 513-721-4284 or 800-272-3900.