

What is a Vascular (Multi-Infarct) Dementia?

Multi-infarct dementia (MID) is a form of dementia caused by a series of small strokes.

Dementia is a loss of brain function that occurs with certain diseases. It affects memory, thinking, language, judgment, and behavior.

Causes

Multi-infarct dementia (MID) is the second most common cause of dementia (after Alzheimer disease) in people over age 65. MID affects men more often than women. The disorder usually affects people between ages 55 and 75.

MID is caused by a series of small strokes.

- A stroke is an interruption in or blockage of the blood supply to any part of the brain. A stroke is sometimes called an infarct. Multi-infarct means that many areas in the brain have been injured due to a lack of blood.
- If blood flow is stopped for longer than a few seconds, the brain cannot get oxygen. Brain cells can die, causing permanent damage.
- When these strokes affect a small area, there may be no symptoms of a stroke. These are often called silent strokes. Over time, as more areas of the brain are damaged, the symptoms of MID begin to appear.
- Not all strokes are silent. Larger strokes that affect strength, sensation, or other brain and nervous system (neurologic) function can also lead to MID.

Risk factors for MID include:

- Diabetes
- Hardening of the arteries (atherosclerosis)
- High blood pressure (hypertension)
- Smoking
- Stroke

Symptoms of dementia may be caused by either Alzheimer disease or MID. The symptoms of both conditions are very similar. MID may be a risk factor for Alzheimer disease.

Symptoms

Symptoms may develop gradually or may progress after each small stroke.

The symptoms of the disorder may begin suddenly after each stroke. Some people with MID may appear to improve for short periods of time, then decline after having more silent strokes.

The early symptoms of dementia can include:

- Difficulty performing tasks that used to come easily, such as balancing a checkbook, playing games (such as bridge), and learning new information or routines
- Getting lost on familiar routes
- Language problems, such as trouble finding the name of familiar objects
- Losing interest in things you previously enjoyed, flat mood
- Misplacing items
- Personality changes and loss of social skills

As the dementia becomes worse, symptoms are more obvious and interfere with the ability to take care of yourself. The symptoms may include:

- Change in sleep patterns, often waking up at night
- Difficulty doing basic tasks, such as preparing meals, choosing proper clothing, or driving
- Forgetting details about current events
- Forgetting events in your own life history, losing awareness of who you are
- Having delusions, depression, or agitation
- Having hallucinations, arguments, striking out, or violent behavior
- Having more difficulty reading or writing
- Having poor judgment and loss of ability to recognize danger
- Using the wrong word, not pronouncing words correctly, or speaking in confusing sentences
- Withdrawing from social contact

Any of the neurologic problems that occur with a stroke may also be present.

Exams and Tests

Tests may be ordered to help determine whether other medical problems could be causing dementia or making it worse, such as:

- Brain tumor
- Chronic infection
- Drug and medication intoxication
- Severe depression
- Thyroid disease
- Vitamin deficiency

Neuropsychological testing is often helpful to find out what parts of thinking have been affected, and to guide other tests.

Tests that can show evidence of previous strokes in the brain may include:

- Head CT scan
- MRI of the brain

Treatment

There is no treatment to turn back damage to the brain caused by small strokes.

An important goal is to control symptoms and correct risk factors such as high blood pressure, smoking, and high cholesterol to prevent future strokes.

- Avoid fatty foods. Follow a healthy, low-fat diet.
- Do not drink more than 1 to 2 alcoholic drinks a day.
- Keep blood pressure lower than 130/80 mm/Hg. Ask your doctor what your blood pressure.
- Keep LDL "bad" cholesterol lower than 70 mg/dL.
- Quit smoking.
- The doctor may suggest aspirin or another medicine called clopidogrel (Plavix) to help prevent blood clots from forming in the arteries. These medicines are called antiplatelet drugs. Do not take or give aspirin without talking to the doctor first.

The goals of helping someone with dementia in the home environment are to:

- Manage behavior problems, confusion, sleep problems, and agitation
- Remove safety hazards in the home
- Support family members and other caregivers

Medicines may be needed to control aggressive, agitated, or dangerous behaviors. The health care provider will usually prescribe these medicines in very low doses and adjust the dose as needed.

Hearing aids, glasses, or cataract surgery may be needed if the person has problems involving these senses.

Outlook (Prognosis)

Some improvement may occur for short periods of time, but in general symptoms should remain static as long as no further strokes occur

Possible Complications

Complications include the following:

- Future strokes

- Heart disease
- Loss of ability to function or care for self
- Loss of ability to interact
- Pneumonia, urinary tract infections, skin infections
- Pressure sores

Prevention

Control conditions that increase the risk of hardening of the arteries (atherosclerosis) by:

- Controlling high blood pressure
- Controlling weight
- Reducing saturated fats and salt in the diet
- Treating related disorders