FORM THE PARISH NURSE….

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STROKE

Signs and Symptoms



- Sudden numbness, weakness, or paralysis of the face, arm, or leg, usually on one side of your body
- Loss of speech, or trouble talking or understanding speech
- Sudden blurred or decreased vision, usually in one eye
- Dizziness, loss of balance, or loss or coordination
- Sudden, severe headache, with no apparent cause
- Difficulty swallowing

Stoke is the common name for several disorders that occur within seconds or minutes after the blood supply to the brain is disturbed.

A stroke is a brain attack. Seek immediate medical assistance, just as you would for a heart attack. Every minute counts. The longer a stroke goes untreated, the greater the damage. Success of treatment may depend on how soon care is given.

The warning signs may be temporary, lasting from a few minutes to 24 hours, but even symptoms lasting only a short time may indicate a stroke. Treat them seriously.

Symptoms may progress or fluctuate during the first day or two after onset. This is called stroke in evolution. When no further deterioration occurs, the condition is considered to be a completed stroke. The only warning signal that suggests you may be prone to a stroke is a transient ischemic attack.

The medical term for the cause of stroke is “cerebrovascular disease,” which indicates that it originates in the blood vessels (from the Latin *vasa* for “vessels”) or your brain (*cerebrum* is Latin for “brain”). Strokes are characterized by the location and type of disturbance. The most common disturbance is a deficient supply of blood through an artery (ischemia). When this happens, the nerve tissue served by that artery rapidly loses its ability to function and may die. The dead tissue is called an infarct.

The most common arterial disease leading to ischemia is atherosclerosis, a condition in which a fatty deposit forms in the inner layer of an artery and results in the formation of plaque. A blood clot (thrombus) may then develop at the site in the artery narrowed by the plaque and block the flow. This type of ischemic stroke is a cerebral thrombosis.

Another type of ischemic stroke, cerebral embolism, may occur when either a plaque fragment or a blood clot (the embolus) that is formed elsewhere is carried by the blood until it lodges in one location and blocks the flow. Emboli may arise from another vessel or from the heart.

A less common type of stroke (cerebral hemorrhage) occurs when an artery leaks blood into the brain, causing compression, displacement, and death of nerve tissue. The initial effect of a hemorrhagic stroke is often more severe than that of an ischemic stroke; the long-term effects, however, are similar in both cases. A severe headache followed by the other signs and symptoms described above is more typical of hemorrhagic than ischemic stroke.

A subarachnoid hemorrhage occurs when there is bleeding between the arachnoid membrane and the surface of the brain. Spontaneous subarachnoid hemorrhage most commonly occurs after the rupture of a saccular aneurysm. A saccular aneurysm is a balloon-like bulge with a narrowed neck that develops in the artery wall. Aneurysmal bleeding sometimes produces bleeding into the substance of the brain (intracerebral hemorrhage).

An arteriovenous malformation is a tangle of abnormal blood vessels. These large, thin-walled vessels usually lead to bleeding into the brain and may cause seizures. Occasionally, arteriovenous malformations run in families.

Stroke is the third leading cause of death in developed countries. Approximately 300,000 Americans suffer a stroke each year. One-fourth of them die, and half the survivors have long-term disabilities. Stroke is more likely to occur as you get older, and the risk doubles each decade after age 35 years. Five percent of the population older than 65 years has had a stroke.

Several risk factors are associated with stroke. It is estimated that 70 percent of all strokes occur in persons with high blood pressure. Some forms of heart disease, such as atrial fibrillation, valvular heart disease, or recent heart attack, increase the chance of stroke because blood clots from the heart may travel up the major arteries to the brain. Smoking, diabetes, and high blood cholesterol concentration also are thought to be liabilities. Although young women have a very low risk, their chances may be slightly increased by the use of birth control pills. For women who smoke, chances are greatly increased. Men have a higher risk than women.

Diagnosis

The diagnosis of stroke does not depend on any single symptom, but a rapid development of symptoms is significant. A large blockage such as a clot or a fragment from a cholesterol plaque deposit that is carried in the blood until it blocks flow (embolism) tends to cause a completed stroke within a few minutes. However, even in

a completed stroke, early care may decrease the amount of damage.

A blockage that develops in place (thrombus) often occurs more slowly. The presence of symptoms that correspond to specific arterial areas within the brain is further evidence of stroke.

To select a treatment, your physician must decide what type of stroke occurred and its location. In addition, other possible causes of your symptoms, such as tumor, need to be excluded.

One or more of the following diagnostic tests may be used to study your blood vessels: carotid ultrasonography, arteriography, computed tomography, and magnetic resonance imaging.

How Serious Is Stroke?

Stroke is a very serious illness. A physician's attention is required immediately.

After any kind of stroke, an area of dead nerve tissue (infarct) may remain after the stroke is complete. Recovery depends on whether other nerve tissue can assume the function of that area. A series of strokes can lead to vascular dementia.

Stroke is an acute (immediate) event that most frequently stems from chronic conditions such as high blood pressure, atherosclerosis, or heart disease. If you have one or more of these chronic disorders, you need close medical supervision.

Emergency Treatment

While waiting for an emergency vehicle to arrive, watch the person suspected of having a stroke. If breathing ceases, CPR is necessary. Minor breathing difficulty may be alleviated by positioning the head and shoulders on a pillow. Watch for vomiting and potential aspiration of vomitus into the lungs. If vomiting occurs, turn the head to the side.

Do not allow the person to eat or drink anything. If paralysis is present, secure and protect the paralyzed parts.

Treatment

Intensive care for a comatose stroke victim includes life-support equipment to supply oxygen, nutrients, and medications and catheterization for bladder function. If the ability to swallow is lost, it may return within 1 or 2 weeks or may never return. In the interim, food and water can be supplied intravenously or directly to the stomach after a procedure called a gastrostomy. Sometimes a stroke results in much less neurologic damage and requires less care.

Medication

The most important consideration following a stroke is to prevent another, possibly more severe, event. Medications that decrease the blood's tendency to clot may be used. These drugs may include aspirin, ticlopidine, and anticoagulants such as heparin or sodium warfarin.

Anticoagulants are potentially dangerous in persons with high blood pressure and extensive damage to brain tissue because they increase the possibility of hemorrhage. (The term blood thinners is used commonly to describe these medications, which decrease the tendency of the blood to clot but do not actually thin the blood.) New drugs that actually open the passageway or "lyse" the clot, called thrombolytic agents, are currently being evaluated.

For hemorrhagic stroke, pain relievers may be needed to relieve headache. If nausea and vomiting are present, intravenous administration of nutrients and fluid may be required for a few days.

Surgery

Surgical procedures sometimes are used to remove blood that has leaked into the tissues from a cerebral hemorrhage. The decision depends on where the hemorrhage occurred and how far it has progressed. If a subarachnoid hemorrhage has occurred, surgical treatment of the underlying aneurysm or arteriovenous malformation is often needed.

Although surgery is used rarely during ischemic stroke, an operation called carotid endarterectomy, which removes arterial plaque deposits, may be used as a preventive measure in some cases. Carotid endarterectomy sometimes is used soon after a minor stroke to prevent a recurrence.

Litin, S. C., & Nanda, S. (2018). *Mayo Clinic family health book*. Rochester, MN: Mayo Clinic.