RECOVERY AND FOLLOW-UP

Recovery varies from patient to patient and depends on the type of aneurysm, its location, whether or not it ruptured, the type of treatment and the patient’s overall physical condition.

After endovascular coiling for unruptured aneurysm, patients are typically observed for 24 hours in the intensive care unit.

For ruptured aneurysm, patients may be monitored in the intensive care unit for two to three weeks.

Possible side effects after surgery include:
• Headaches
• Drowsiness and fatigue
• Incision pain
• Jaw pain
• A clicking noise in the head
• Visual disturbances
• Partial or complete blindness
• Peripheral vision deficits
• Fine motor control impairments
• Emotional problems
• Depression
• Cognitive difficulties
• Speech problems
• Perceptual problems
• Behavioral changes
• Loss of balance or coordination
• Decreased concentration
• Short-term memory problems

As with stroke, recovery and rehabilitation are important aspects of aneurysm treatment. Rehabilitation may include physical, speech and/or occupational therapy.

SCREENING

Screening of other family members may be recommended if more than one aneurysm exists in a patient’s immediate family or if a family member has multiple aneurysms.

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WHAT IS A CEREBRAL ANEURYSM?

A cerebral aneurysm is an area where a blood vessel in the brain weakens, resulting in a bulging or ballooning out of part of the vessel wall, usually at the point where a blood vessel branches because the “fork” is not as strong. Aneurysms can range from about an eighth of an inch to almost an inch and usually occur at the base of the brain, where they may cause bleeding.

Every year, an estimated 30,000 people in the United States experience an aneurysm. Aneurysms occur in all age groups, but the risk increases with age. The majority of aneurysms occur in people age 50 to 60, and they are three times more prevalent in women. Ruptured aneurysms are fatal 30 to 40 percent of the time. Multiple aneurysms or a family history of aneurysms increases a person’s risk.

TYPES OF CEREBRAL ANEURYSMS

- **Saccular aneurysms** are the most common type of aneurysms and occur at the branching points of the large blood vessels at the base of the brain. They develop gradually over a period of years, so the risk of rupture increases with age.
- **Fusiform aneurysms** involve most or all of the entire circumference of the blood vessel. They may rupture or cause symptoms similar to stroke.
- **Mycotic aneurysms** are rare and result from infection, which damages and weakens the blood vessel, increasing the risk of rupture.
- **Traumatic aneurysms** are caused by an accident or trauma. The damaged blood vessel weakens at the site of the injury and may rupture.

CAUSES OF ANEURYSMS

Although the exact cause of aneurysms is unknown, factors that are believed to contribute to their formation are:

- High blood pressure
- Cigarette smoking/nicotine use
- Diabetes
- Excessive alcohol consumption
- Genetic predisposition
- Injury or trauma
- Complication from some types of blood infections.

SIGNS AND SYMPTOMS

People who suffer a ruptured aneurysm may have warning signs, including:

- Localized headache
- Nausea and vomiting
- Stiff neck
- Blurred or double vision
- Sensitivity to light
- Loss of sensation

Many people with unruptured aneurysms have no symptoms. Others might experience some or all of the following symptoms:

- Cranial nerve palsy
- Dilated pupils
- Double vision
- Pain above and behind the eye
- Localized headache
- Progressive weakness or numbness

TREATMENT OPTIONS

There are three treatment options for people diagnosed with an aneurysm:

- **Observation and/or nonsurgical therapy.**
  Observation is considered a reasonable option if the aneurysm is small or in a location that is considered to have a low risk of growth or rupture. Repeated testing over time is necessary because there is still a risk of rupture. Medical therapy and lifestyle changes (stopping smoking, lowering blood pressure, dietary changes) are also options for the treatment of unruptured aneurysms. Periodic radiographic imaging (MRA, cerebral angiography or CTA) is usually recommended.

- **Endovascular therapy/coiling.** Ninety percent of aneurysms can now be treated with endovascular coiling. Performed under general anesthesia, a tiny catheter is fed into the aneurysm through a larger catheter inserted an artery, usually in the groin. A tiny wire filament or “coil” is then fed into the aneurysm. This flexible platinum coil forms itself into a basket, after which additional coils are placed. This prevents the flow of blood into the aneurysm. A clot forms within the aneurysm and new tissue may grow across the coils at the base of the aneurysm, resulting in complete healing. Sometimes the interventional neurologist has to use a stent if the opening of the aneurysm is too wide to safely place coils. If a stent is placed, the patient needs to be on two anti platelet medications for 6 months after the procedure.

- **Surgical therapy/clipping.** An operation to “clip” an aneurysm is performed under general anesthesia through a craniotomy, a surgical procedure in which the brain and blood vessels are accessed by creating an opening in the skull. After separating the aneurysm from the blood vessels and brain tissue, a small metal clip is applied to the base of the aneurysm, which separates it from the originating blood vessel. Clips are permanent, remain in place and generally provide a cure for the patient.