CHAPTER 4

Serious Headaches Requiring Medical Attention

"Oh my God! The pain! My head feels like it’s going to explode! I hope it’s not a brain tumor!"

Fears of brain tumor, aneurysm, or other unknown, but equally dire consequences usually cross the mind of someone who experiences a first severe headache. With all the media attention these dramatic diseases garner, it would be unusual if these thoughts did not intrude. Fortunately, such incidences are rare. Primary headaches (headaches that are themselves the problem) greatly outnumber secondary headaches (headaches that indicate an underlying problem). Headache is rarely the first indication of a dangerous medical condition. But what if it is? When should you definitely seek immediate help? Table 4-1 lists a series of warning signs that will help you identify serious problems.

SERIOUS MEDICAL CONDITIONS THAT CAN CAUSE HEADACHE

Aneurysm

One of the most serious illnesses of which headache is a symptom is called a subarachnoid hemorrhage—bleeding under the membrane that surrounds the brain. A subarachnoid hemorrhage is usually caused by a weakening of the walls of a blood vessel, causing a bulge called an aneurysm. If the aneurysm breaks, blood rushes onto the surface of the brain. Sometimes the blood vessel that breaks is part of an abnormal tangle of blood vessels called a vascular malformation. The headache caused when a blood vessel
breaks comes on very suddenly, similar to being hit with a baseball bat. Sometimes, but rarely, aneurysms come on more slowly, but they will still reach peak intensity in about 60 seconds. Aneurysm bleeds are true medical emergencies. A significant percentage of people die before reaching the hospital. Many will die or suffer a stroke even with the best care. Early diagnosis and, in some cases, early surgery can save lives and prevent future strokes. Unless the aneurysm is surgically clipped or a coil placed within it through the artery—and even if the person appears healthy after an aneurysm has bled—it may bleed again, perhaps fatally (Figure 4-1).

Giant Cell Arteritis

Giant cell (temporal) arteritis is a disease that usually occurs in the elderly. It causes inflammation of blood vessels in the head. This condition
may be associated with scalp tenderness over an artery, a generalized feeling of illness, and joint and muscle pain (which is part of a condition called *polymyalgia rheumatica*, which is very common in people with giant cell arteritis), low-grade fevers, depression, and visual disturbances or stroke.

Meningitis and Encephalitis

Meningitis is an infection of the spinal fluid and the linings covering the brain. There are several types of meningitis, the most dangerous of which is *bacterial* meningitis. The person is usually very ill and has an extremely stiff neck, a severe headache, a fever, and sometimes reduced consciousness and seizures. Treatment with antibiotics should be begun as quickly as possible because long-term complications may be avoided with early treatment. Individuals who have *viral* meningitis are usually less ill and have fewer complications. The headache in meningitis is two-sided, generally severe, and worsens relentlessly over hours or days. The neck is often so stiff that the person has trouble bending the neck forward more than a few inches. The headache may be accompanied by sensitivity to light and sound, as well as nausea and vomiting. A mild jolt, such as hitting a small bump in the road when riding in a car, is extremely painful.
Encephalitis is an infection involving the substance of the brain, not just the coverings. Symptoms such as reduced consciousness, weakness, and speech and language problems are more prominent than in meningitis. The most famous encephalitis of late is caused by West Nile virus, but there are many different infectious causes. Meningitis and, at times, encephalitis require a spinal tap for diagnosis, as well as a computed axial tomographic (CT) scan or magnetic resonance imaging (MRI).

Brain Tumor

Headache caused by a brain tumor can resemble any type of primary headache, but it especially resembles migraine or tension-type headache. A brain tumor can also cause worsening of a primary headache problem. It used to be believed that a headache that occurs upon awakening is typical of a brain tumor, but the fact is that this is uncommon, and morning headaches are usually not caused by brain tumors. Headache is not the most reliable sign of brain tumor. More important symptoms of brain tumor include weakness, loss of vision or sensation on one side of the body, clumsiness of the limbs, difficulty walking, and seizures that are due to dysfunction of the part of the brain where the tumor is located (Figure 4-2).

Sometimes people with brain tumors have a headache that starts out mild, but relentlessly worsens over days or weeks. This type of headache may also be caused by blood clots that press on the brain. More than half of those with brain tumors have headache, and 80 percent of them have pain on the same side as the tumor. However, brain tumor headache is usually associated with weakness, trouble talking or walking, or seizures. People with brain tumors may have headaches (which are often mild) that resemble migraine or tension-type headache. These headaches often become progressively worse, start late in life, or are associated with seizures, confusion, prolonged nausea, hemiparesis (one-sided weakness), swelling of the nerves in the back of the eyes, or other neurologic abnormalities.

Pseudotumor (a condition that looks like a tumor but is not) occurs when there is elevated spinal fluid pressure, usually accompanied by
signs of swelling in back of the eye and temporary visual symptoms. This type of headache is relieved by a spinal tap—some people even ask for another one!

Hypertension

A common misconception is that headaches are caused by high blood pressure. In order for high blood pressure to cause a headache, it has to be so high that it overcomes the normal protective reflex of the brain’s blood vessels. While the point at which this occurs varies, usually the diastolic blood pressure (bottom number) needs to be above 115. Blood pressure so high that it causes a headache is a medical emergency. Some people may have high, but not immediately dangerous, blood pressure due to pain caused by a headache. Some blood pressure medicines can treat migraine, and a headache may occur when a person’s blood pressure medicine is stopped, if the particular medication was helpful for the headache. Likewise, treating high blood pressure with medicine that also treats migraine may help the headache, giving the impression that high blood pressure causes headache.
Dissection

A *dissection* is a rupture of the lining of an artery. Blood enters and expands the wall of the artery, narrowing or completely obstructing the artery and limiting blood flow to the brain. A headache resulting from dissection may resemble migraine, even migraine with aura. It may cause transient stroke-like spells or a full-blown stroke—a sudden loss of neurologic function that persists for more than 24 hours. Symptoms include weakness, numbness, blindness, and the inability to speak (Figure 4-3).

Complicating this picture is the fact that migraineurs are at increased risk for developing a dissection. Minor neck injuries, including falls, car accidents, chiropractic manipulation, and even roller coaster rides, can precipitate dissection.

**SPINAL HEADACHE AND OTHER LOW PRESSURE HEADACHES**

As discussed in Chapter 3, a spinal tap (lumbar puncture) is a procedure in which a doctor collects spinal fluid through a needle placed into the spine in the lower back. It is a very safe, minor surgical procedure, with

**FIGURE 4-3**

A carotid dissection is a rupture of the lining of the carotid artery, which limits the supply of blood to the brain and can cause a headache that resembles migraine.
long-term complications and permanent injury being extremely rare. However, about 10 percent of the time, a medium-term complication called a spinal headache occurs. This headache may be caused by a persistent leak of spinal fluid through a hole in the coverings of the spinal cord. The headache goes away when the sufferer lies down, but will return in seconds or minutes when he stands up again. It usually starts in the back of the head or upper neck and spreads over the entire head. Nausea and light and sound sensitivity do not accompany this type of headache. Lying down flat for hours after a lumbar puncture, which is commonly recommended, does not protect someone from getting a spinal tap headache.

Spinal headaches usually improve over several days. During this time, the sufferer should lie flat and drink plenty of fluids. An abdominal binder may help. Rapidly administered oral caffeine (No-Doz®) may help; intravenous caffeine is more effective. A procedure called a blood patch, in which the person’s own blood is withdrawn from the forearm and injected into a space surrounding the spinal cord, may need to be done. This procedure is 98 percent successful and works instantly.