12.1: Stroke

A stroke is a medical condition in which poor blood flow to the brain results in cell death. This results in part of the brain not functioning properly. The main types of stroke are:

- Ischemic stroke.
- Hemorrhagic stroke.
- Transient ischemic attack (a warning or “mini-stroke”).

Figure \(\PageIndex{1}\) Hemorrhagic and Ischemic Strokes
Ischemic Stroke

Most strokes (85%) are ischemic strokes. If you have an ischemic stroke, the artery that supplies oxygen-rich blood to the brain becomes blocked.

Blood clots often cause the blockages that lead to ischemic strokes.

Hemorrhagic Stroke

A hemorrhagic stroke occurs when an artery in the brain leaks blood or ruptures (breaks open). The leaked blood puts too much pressure on brain cells, which damages them. High blood pressure and aneurysms—balloon-like bulges in an artery that can stretch and burst—are examples of conditions that can cause a hemorrhagic stroke.

There are two types of hemorrhagic strokes:

- **Intracerebral hemorrhage** is the most common type of hemorrhagic stroke. It occurs when an artery in the brain bursts, flooding the surrounding tissue with blood.
- **Subarachnoid hemorrhage** is a less common type of hemorrhagic stroke. It refers to bleeding in the area between the brain and the thin tissues that cover it.

Transient Ischemic Attack (TIA)

A transient ischemic attack (TIA) is sometimes called a “mini-stroke.” It is different from the major types of stroke because blood flow to the brain is blocked for only a short time—usually no more than 5 minutes.

It is important to know that:

1. A TIA is a warning sign of a future stroke.
2. A TIA is a medical emergency, just like a major stroke.
3. Strokes and TIAs require emergency care. **Call 9-1-1** right away if you feel signs of a stroke or see symptoms in someone around you.
4. There is no way to know in the beginning whether symptoms are from a TIA or from a major type of stroke.
5. Like ischemic strokes, blood clots often cause TIAs.
6. More than a third of people who have a TIA end up having a major stroke within 1 year if they don’t receive treatment, and 10%-15% will have a major stroke within 3 months of a TIA.

A health care team can usually find the cause and take steps to prevent a major stroke. Recognizing and treating TIAs can reduce the risk of a major stroke.

Recognizing a Stroke – Think FAST!

During a stroke, every minute counts! Fast treatment can lessen the brain damage that stroke can cause. By knowing the signs and symptoms of stroke, you can take quick action and perhaps save a life—maybe even your own.
Signs of Stroke in Men and Women

- Sudden **numbness** or weakness in the face, arm, or leg, especially on one side of the body
- Sudden **confusion**, trouble speaking, or difficulty understanding speech
- Sudden **trouble seeing** in one or both eyes
- Sudden **trouble walking**, dizziness, loss of balance, or lack of coordination
- Sudden **severe headache** with no known cause

**Call 9-1-1 right away if you or someone else has any of these symptoms.**

Acting F.A.S.T. can help stroke patients get the treatments they desperately need. The stroke treatments that work best are available only if the stroke is recognized and diagnosed within 3 hours of the first symptoms. Stroke patients may not be eligible for these if they don’t arrive at the hospital in time.

If you think someone may be having a stroke, act F.A.S.T. and do the following simple test:

**F—Face:** Ask the person to smile. Does one side of the face droop?

**A—Arms:** Ask the person to raise both arms. Does one arm drift downward?

**S—Speech:** Ask the person to repeat a simple phrase. Is the speech slurred or strange?

**T—Time:** If you see any of these signs, call 9-1-1 right away.

**Note the time when any symptoms first appear.** This information helps health care providers determine the best treatment for each person. Do not drive to the hospital or let someone else drive you. Call an ambulance so that medical personnel can begin life-saving treatment on the way to the emergency room.