Anterior Cerebral Artery Stroke

Arteries carry blood that contains oxygen to the brain. The flow of blood through the arteries can stop if the artery is blocked or bleeds. This is called a stroke. It is also known as a cerebrovascular accident or CVA. This handout looks at what occurs when a stroke happens in the brain’s anterior cerebral artery.

Effects

When the anterior cerebral artery is blocked, the middle part of the frontal lobe of the brain loses its supply of oxygen. This area of the brain controls thought, personality, and movements. Damage to this part of the brain can cause:

• Changes in movement and sensation
• Changes in personality
• Loss of control of the bladder or bowels

The artery supplies blood to both sides of the brain, so the stroke may happen on just one side or it may cause damage to both sides of the brain.

Changes in movement and sensation

• The loss of controlled movement and changes in sensation are often found in the leg on the opposite of the side of the stroke.
• Most often the problems are in the foot and lower leg. These changes can also occur in the shoulder, arm and face, but they are less common.
• The changes in sensation can make it hard for a person to feel touch or know where they are being touched.
  › For instance, something touching their foot may feel like touching on the leg. The person may not feel pain and temperature in that area.
• The person may find it hard to know where their body is and how it is moving.
• Unwanted movements may also occur on the opposite side of the stroke. The person may grasp and grope with their hand. It can also include facial movements, like pouting lips.
• If the stroke was on both sides of the brain, there can be movement and sensory problems with both sides of the body. They may also have trouble using both hands to do a task.
Changes in personality

Personality changes can be very different from person to person. Someone with this type of stroke may have none or many personality changes, including:

- Being more emotional.
- Being more excited, happy, angry, or irritated.
- Having emotional outbursts that are not appropriate to the situation.
- Acting childlike or silly.
- Not be able to judge what is appropriate and making rude or sexual remarks or taking actions that they would not have done before the stroke.
- Showing no interest or feeling and not responding to the world around them. They may go back and forth from excited to apathetic.

Problems with speech

- This type of stroke can cause problems with the ability to speak or write or to understand speech or writing, called aphasia.
- The person may be able to repeat things when asked, but has a hard time answering questions or expressing thoughts.
- They can often read things out loud, but may not understand what they have read. In some cases, the person may not be able to speak for days or weeks after the stroke.

Loss of control of bladder or bowels

- Bladder or bowel control is often lost when this type of stroke injures both sides of the brain.