Effects of Anterior Cerebral Artery Stroke

A stroke, also called a cerebrovascular accident or CVA, happens when an artery to your brain is blocked. Arteries carry blood that contains oxygen to the parts of the body, including the brain. The flow of blood through the arteries can stop if the artery is blocked. This handout looks at what occurs when a stroke happens in the anterior cerebral artery in the brain.

When this artery is blocked, the middle part of the frontal lobe of the brain looses its supply of oxygen. This part of the brain controls thought, personality and movements. Damage to this part of the brain can effect:

- Changes in movement and sensation
- Changes in personality
- Problems with speech
- Loss of control of the bladder or bowels

The artery supplies blood to both sides of 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 someone touching their 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 his or her hand. It can also include facial movements like pouting lips.

If the stroke has occurred on both sides of the brain they will have 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

These changes can be very different between patients. A person with this type of stroke may have none or many changes in their personality. The person may:

- Be more emotional
- Be more excited, happy, angry, or irritated
- Have emotional outbursts that are not appropriate to the situation
- Act childlike or silly
- Lose inhibitions
- Not be able to judge what is appropriate and make rude or sexual remarks or take actions that he or she would not have done before the stroke
- Become apathetic and not respond to the world around them
- May go back and forth from excited to apathetic
Problems with Speech

This type of stroke can cause aphasia that is problems or loss of the ability to speak or write or to understand speech or writing. Often there are problems with voluntary speech. The person may be able to repeat things when asked but has a hard time answering questions or expressing themselves. He or she 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 their 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.

Talk to your doctor or others on your health care team if you have questions. You may request more written information from the Library for Health Information at (614) 293-3707 or email: health-info@osu.edu.