Effects of Left Middle 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 left middle cerebral artery in the brain.

The middle cerebral artery divides into a right middle cerebral artery and a left middle cerebral artery. The left middle cerebral artery provides blood to a large part of the left side of the brain. The artery divides into smaller artery branches. Based on where the blockage occurs in the artery or in the branches, the effects will vary. Damage most often can cause changes in:

- Movement and sensation
- Attention, memory and judgment
- Perception
- Speech
- Vision

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Rarely, this type of stroke can cause hearing problems. If the stroke is in this artery, many of the problems will show up on the right side of the body. Ask your doctor or nurse if you are not sure which artery had the blockage and stroke.

**Changes in Movement and Sensation**

The loss of movement or weakness occurs on the right side of the body. The amount of loss can be equal over the entire right side of the body, including the face. Or based on where the stroke occurred, it may be worse further away from the trunk of the body. For instance, moving the knee or foot may be more difficult than moving the hip. Often the muscles of the mouth, the tongue, and throat may be affected making it hard to speak or swallow.

The person may not feel when he or she is touched or know where they are being touched. For example, something touching their foot may feel like someone touching their leg. They may not be able to tell what an object is by touching it. The person may not feel pain and temperature in that area. The person may not know where their body is and how it is moving.

The person may have problems looking to the right side. They may have problems moving their eyes toward the right, and moving their head to the right. A less common effect is a problem called right neglect. Because the part of the brain that controls their right side is not working, the person may not remember it is there, or that they are not able to move it. The person may only eat food that is on the left side of the plate, or only brush the hair on the left side of their head. They may also have trouble paying attention to anything that happens on their right side, including someone standing to the right and speaking to them.

**Changes in Attention, Memory and Judgment**

The person that had a stroke on the left side may have problems with attention. They may not be able to focus to complete a task, even when it is something they wish to do.

Problems with memory and motivation are common. It can be hard for them to form new memories. Problems with reading, writing and doing math are common. The person with this stroke may confuse left and right.
Motor planning is often a problem for people with this type of stroke. Our brains store plans of how to do tasks, like standing up from a chair or brushing our hair. This person may not be able to use these plans, making the movements hard to do correctly. For example, walking is often very hard because their body is not able to plan to pick up their foot and take a step, even though they may be strong enough to do it. This can make movements look jerky and strange.

**Changes in Vision**

The person may lose part of their field of vision on the right side in one or both eyes.

**Changes in Speech**

Most people have two parts of the brain that control language on the left side of their brain. Both of these areas are supplied by different parts of the middle cerebral artery. Problems with speech and understanding language called aphasia are common with this type of stroke.

- **Non-fluent aphasia**
  
  Person will have trouble speaking words out loud. Their sentences are short and missing words. Instead of saying, “I want to take the dog for a walk,” they would say, “dog walk.” Their speaking will be very slow and difficult.

- **Fluent aphasia**

  Person speaks in full sentences but will say the wrong words or made up words. Instead of saying, “I want to take the dog for a walk,” they would say, “I used to take the cars for a salk.”

- **Global aphasia**

  Person has problems with speaking and understanding what is said to them.

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.