

EMERGENCY EVALUATION AND TREATMENT OF STROKE

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Neurologists have a saying when it comes to stroke treatment: “Time is Brain.” Like a heart attack, the key to good stroke treatment is early and rapid evaluation. In the last decade, we have seen amazing advances in the treatment of stroke, but most of these treatments can only be given in the first few hours. As such, I cannot emphasize enough the most important factor: Get to the hospital as soon as possible! If you suspect someone is having a stroke, do not wait, call an ambulance right away. Do not attempt to drive the person (or yourself) to the hospital. Try to note the time that the person’s symptoms began. When they arrive, tell the paramedics what happened, including the time, and any medical history you may know. If you are not the patient, follow the ambulance to the hospital (if possible), as the doctors may want to speak with you as well.

The focus in the emergency room will be on two things: determining if the patient is having a stroke, and then determining the appropriate treatment. If a stroke is felt likely, the next step is to find out if it is an ischemic (blockage) or hemorrhagic (bleeding) type of stroke. They will then use that information to determine how to treat that stroke. To get this information, the doctors and nurses will likely perform a series of procedures and tests in a very quick and efficient manner:

- A physician will ask about the symptoms and any recent medical problems
- An emergency room physician and likely a neurologist will look for signs of stroke on a physical examination
- Blood will be drawn for certain laboratory tests
- A CT scan (a type of X-ray) will be done to look for any signs of bleeding or early signs of the stroke

If there is bleeding found on the CT scan, treatment will likely consist of blood pressure control and watching closely for complications. They may call a neurosurgeon as well, although this is usually a precaution and most patients will not require any sort of surgery. They will admit the patient to the hospital so a close watch can be kept and any problems can be treated early.

If there is no bleeding and a blockage-type stroke is suspected, the next step will be to determine if the person is a candidate for therapy with a “clot-buster” drug, usually a medication called tissue plasminogen activator, or tPA for short. This medication is designed to help break up the clot that is blocking blood flow to the brain, and therefore improve the chances of a good recovery. While it does not usually improve things right away, it has been shown that patients who receive this medication have less long-term problems from their stroke.

The medication does have some risk, however, and a small number of patients who receive the medication have bleeding problems that can actually make things worse. The physicians therefore have a list of things they look for to identify who would be less likely to have bleeding problems and more likely to benefit. The most important factor in this decision is the time since the stroke began. They will try to find out when the last time was that the patient was without symptoms. If the problems have been present for more than 4 1/2 hours, the risk of giving the medication will be too high. That is one of the reasons why it is very important to get to the emergency room as soon as possible. Patients on warfarin (Coumadin) (a strong blood thinner medication) are also at a higher risk of bleeding and in general will not be given the medication. Finally, patients who are already showing improvement are usually not given tPA, as they are more likely to do well even without the medication.

Another option available to restore blood flow from a blocked artery within the brain is to perform a procedure called a thrombectomy. This procedure removes the blood clot and is an option for the more severe strokes. This procedure also has specific criteria, time restrictions and complications similar to tPA yet can save your life so again calling 9-1-1 and getting to the hospital is so very important.

No matter what type of stroke or what happens in the emergency room, the patient will almost certainly be admitted to the hospital for further testing and to keep a close watch for problems.