Stroke: Major cause of disability

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Stroke is one of the most devastating illnesses that can affect people. Due to its major disabling features, it is the least preferable of any of the major diseases.

During a stroke patients may lose control of their arms, legs, ability to talk, eat or to see properly. A large stroke can cause death. Others can leave long-term complications, which are difficult on patients and their families.

Stroke is the third leading cause of death in the U.S. and second worldwide in both men and women.

There are 200,000 cases of death due to stroke and 795,000 new and recurrent cases of stroke every year in the U.S. Cardiovascular diseases (stroke and heart attack) cost a staggering $444 billion in terms of medical care and lost productivity. There are 5.8 million adults living with long term disability in the U.S.

Stroke (brain attack) is a medical emergency that occurs when the blood supply to a certain part of the brain is completely cutoff or greatly reduced. Strokes are of two types. Ischemic strokes makes up 80 percent of cases while hemorrhagic stroke is 20 percent. Cardio embolism (clot from the heart) is responsible for 20 percent of all ischemic strokes.

Symptoms depend on the area affected.

Definition of the stroke is sudden onset of focal neurological deficit lasting more than a 24-hour period. It is called transient ischemic attack (TIA; mini stroke) if symptoms are resolved within 24 hours. Symptom of stroke includes sudden onset of facial droop, arm and leg weakness, slurring of speech, inability to talk, inability to eat, difficulty seeing with one eye or both eyes, confusion or alteration of their mentally status, and trouble walking as well as balancing.

People who have a history of hypertension, atrial fibrillation, diabetes mellitus, high cholesterol, or a family history of stroke are at high risk to this problem. Aggressive treatment of hypertension is very important in reducing the risk of a stroke. Med-wire News on September 29, 2011, based on meta-analysis of 12 studies involving more than 500,000 patients, showed that pre-hypertension (systolic BP 130 to 139 and diastolic BP 85-89) are at increased risk of having stroke.

Workup of stroke includes Doppler ultrasound of the carotid arteries in the neck. If the blockage is more than 70 percent then surgery is needed to bypass the blocked area. Cerebral angiography is the gold standard for identifying the blockages inside the brain arteries. Balloon angioplasty can be done and a stent can be placed if necessary.

Aspirin is usually used to prevent stroke. If stroke occurs while on aspirin then a stronger ant-platelet drug like Plavix is prescribed. Preventive measures includes dietary modification, exercise, control of hypertension, diabetes and cholesterol and smoking cessation.

In terms of treatment, time is of the essence. After signs and symptoms of a stroke are recognized, 911 should be called. The patient should be transported by a paramedic who can assess their ABC (airway, breathing and circulation). They can provide much-needed oxygen and an intravenous access.

On arrival, the emergency room physician will quickly assess the patient, order lab tests, do a CT scan of the head and activate the stroke team if available. Onset of a stroke is determined before any decision is made to administer the clot busting drug (t-PA) transminogen plasma activator. They must reach the ER within three hours and meet certain criteria before being eligible for that medication. There are some patients who can qualify for this medication up to 4 1/2 hours after the onset of symptom unless their age is more than 80, they are diabetic, have prior episode of ischemic stroke, and are taking oral anti-coagulation regardless of INR.

Long-term complications will include skin breakdown, depression and aspiration pneumonia, and difficulty with learning, concentrating and memory. Some patients require comprehensive rehabilitation where physical (walking), occupational (strengthening) and speech therapy (speech, memory, and balancing checkbooks) are provided. A video swallow study is performed to determine the type and consistency of food they will be able to tolerate.

U.S. government officials have announced an initiative to prevent 1 million heart attacks and stroke during the next five years. Naturally, up-to-date protocol and public education is a very important part of the same process. Early recognition and rapid response will prevent a large number of deaths and disabilities.

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