Ischemic Stroke

Accidente Cerebrovascular Isquémico

An ischemic cerebrovascular accident or stroke is caused by the abrupt blockage of arteries leading to the brain, and can involve one or more vascular territories.
It is the fourth cause of death and the leading cause of disability in elderly patients. Its incidence increases over 55 years of age.

WHAT ARE THE RISK FACTORS?

High blood pressure
Its adequate control reduces the chances of ischemic or hemorrhagic stroke.
Lipids
Fats in the blood are carried by a "transportation system" called lipoproteins; increased LDL-cholesterol –also known as bad cholesterol– is associated with atheroma formation.
Cholesterol testing is recommended for adults. The doctor may decide to test it in young patients when there are situations that increase vascular risk, such as diabetes, high blood pressure, family history of heart attack, etc.
Diabetes
Diabetes and serum glucose levels higher than normal (prediabetes) at risk of becoming diabetes are associated with the risk of atherosclerosis, heart disease and stroke.
Abnormal heart rhythm
Arrhythmias, such as atrial fibrillation, raise the risk for stroke.
It is necessary to see a doctor in case of palpitations or irregular heartbeat.
Smoking
It is one of the main modifiable risk factors for all cardiovascular diseases, such as ischemic cardiomyopathy, peripheral vascular disease, and stroke.
Obesity
It is associated with vascular risk. Overweight, obesity and abdominal fat (abdominal circumference) should be reduced. Normal abdominal circumference should be lower than 102 cm in men and 88 cm in women.
Changing dietary habits is recommended, such as reduction of salt and fat intake, limiting alcohol intake, and increasing the consumption of fruits and vegetables.
Physical inactivity
Aerobic exercises such as walking, cycling, jogging, dancing or swimming at least three times a week are recommended, as they often reduce cholesterol, glucose, and blood pressure, and help maintain a proper weight.

WHAT CAUSES A STROKE?

It can occur when arteries are blocked by detached clots coming from the heart or the vessels, causing a stroke (embolic stroke) (Figure 1).
Progressive thrombus formation in the atrial wall can also block the lumen of either big or small vessels, not allowing for adequate oxygenation of the brain (Figure 2).
The causes of stroke among young patients are diverse, including genetic causes, weakness of the arterial wall, coagulation disorders, defects in the heart walls, or arterial dissections.

HOW DO I RECOGNIZE THE SYMPTOMS?

Recognizing symptoms is essential to act fast and minimize neurological damage. In some cases, the symptoms last a few seconds, minutes, or hours, and then reverse spontaneously. This type of neurological insult is called transient ischemic attack (TIA). People with TIA are more likely to have an ischemic stroke within the next hours or days.
The most common manifestations involve:
Motility: Loss of strength in any of the limbs, lip corner deviation.
Sensitivity: Numbness or tingling in the limbs or face.
Speech: Slurred speech, difficulty recognizing or naming objects or understanding phrases, inability to recognize letters or make calculations.
Vision: Unilateral transient blindness, partial loss of the visual field.
Others: Loss of balance, vertigo, dizziness, difficulty in swallowing, or impaired consciousness.

WHAT TO DO IN CASE OF SYMPTOMS

When a stroke occurs, brain tissue can be saved if we act fast.
When cerebral blood flow decreases (ischemia), survival of the tissue at risk depends on time, ischemia intensity, and circulation in the neighboring arteries.
Do not wait. Time is crucial in these cases. If the victim can move on his or her own, he/she must go immediately to the nearest emergency service.
Warn the receptionist at the emergency room on the possibility of stroke.
It is an Emergency.

WHAT TREATMENTS ARE CURRENTLY AVAILABLE?

The sooner the victim receives treatment, the greater the likelihood of better outcomes. Within 4 and a half hours of the ischemic event an intravenous treatment is used with a drug that breaks up the blood clots in the artery, which by recanalization reduces the brain damage caused by the blockage.
Another option is an invasive treatment in which doctors introduce a catheter to the blocked artery in the brain, administering the same drug at a lower dose or removing the clot with special devices.

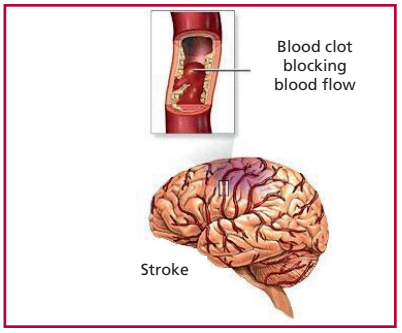

Fig. 1

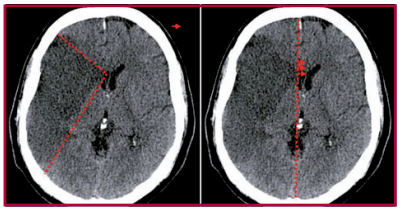

Fig. 2

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