You will soon have, or you recently had, surgery to remove a blood clot in a brain vessel. This fact sheet tells you how this is done and what you need to know.

Why do I need this procedure?

This procedure is done urgently when a clot prevents blood from circulating in an area of the brain. This is called an acute ischemic stroke (AIS). The affected area in the brain no longer has enough blood to function normally.

Fast action is needed to avoid the serious problems this can cause.

Usually, this procedure is done within 6 hours after the first signs of stroke.

Blood clot in the brain
What is the procedure?

Endovascular thrombectomy is done in the radiology department. The clot is removed using a small flexible tube (catheter) and a rigid wire (guide).

Steps of the procedure

1 A catheter and guide are inserted into an artery at the groin.
2 These are pushed all the way to the blocked artery in the brain.
3 A metal tip at the front of the guide breaks up the clot.
4 The pieces of the clot are vacuumed into the catheter.

Are there any risks associated with this procedure?

This is a serious procedure, but complications are rare. The most frequent ones are:
- bleeding (hemorrhage) in the groin or brain
- infection

The doctor will explain the risks to you and will answer any questions you may have.

Are there any precautions to take BEFORE the procedure?

You should inform the care team if:
- you are taking any blood thinners (Aspirin, Plavix, Coumadin, Eliquis, Pradaxa, Xarelto, or other)
- you have any allergies (such as to iodine, disinfectants, antibiotics or analgesics)
- you think you are pregnant
- you have diabetes, high or low blood pressure, heart disease, vascular disease (such as phlebitis in a calf or an arm), or a neurological disease (such as epilepsy or Parkinson’s disease)
- you have had surgery or bleeding in the past year (such as blood in your urine or stools, frequent bruising)
Depending on the case, the care team will take special precautions or give you medication to be able to do the procedure.

What does the procedure involve?

**THE PREPARATION**
- You must not drink or eat before the procedure.
- You will be asked to urinate, if possible; otherwise a urinary catheter will be inserted.
- Instruments are put in place to measure heart activity and 2 tubes are inserted into your veins to be able to give you medication if needed.
- You will lie on your back, with your head and limbs secured with Velcro bands; this is to keep you from making movements that could interfere with the procedure.
- The doctor (a neuroradiologist) will disinfect your skin where the catheter is going to be inserted.
- Your body will be covered with a sterile cloth (called a “sterile field”) to prevent infection.

**THE PROCEDURE**
- Using a local anaesthetic, the neuroradiologist will “freeze” the area of the groin where the catheter and guide will enter.
- Once the clot has been removed, the doctor will apply pressure on the cut in the groin for 5 to 10 minutes to close it.
- The doctor will then apply a bandage to prevent bleeding.
- Another doctor (a neurologist) and a nurse will monitor your condition during the procedure and will give you medication if needed.

How long does the procedure take?
From 30 minutes to 2 hours:
- about 30 minutes of preparation
- 1 to 2 hours for the procedure, depending on how complex the case is

Is the procedure painful?
You may feel pressure where the catheter enters, but when it moves through your arteries, there is no pain. If the pressure is uncomfortable, you will be given pain medication.

What does the care team do AFTER the procedure?
- They will take you to a room where you can continue to recover, either in the Stroke Unit or the Intensive Care Unit.
- The care team will regularly monitor your condition and your vital signs (blood pressure, pulse, breathing, temperature, etc.); they will also check to make sure you are able to urinate and move your bowels.
- They will check to see how well you are able to swallow. See the brochure *Detecting problems with swallowing*.
- They will inform your doctor if there is any change in your health condition.
- They will check to make sure you are comfortable, and they will respond to any questions or needs for support that you or your family might have.
- The team will make a plan with you for follow-up care and treatments.
Are there any precautions to take AFTER the procedure?

You should:

> for 6 hours: keep your leg straight (the one that the catheter was inserted into)
> for 24 hours: do not get up at all
> ask the care team for help if you want to change position or get out of bed when you are able to get up
> eat and drink according to the instructions given to you by the care team
> follow their instructions when it is time to start taking care of your own personal hygiene or when you want to walk in the corridor
> call a nurse immediately if you experience any of the following signs:
  - difficulty swallowing or breathing
  - sudden headache
  - pain in the groin that gets worse even with medication
  - dizziness
  - nausea or vomiting
  - constipation or diarrhea
  - drowsiness and difficulty following instructions
  - general discomfort and difficulty holding still
  - swelling of the bump under the bandage on your groin
  - paleness, extreme fatigue, heart palpitations

Medications

If you were taking medications before (for diabetes, blood pressure, clotting, etc.), your doses may be changed.

You may also be given new medications to take. If so, the neurologist and the nurse will tell you.

Who can I contact for help or to ask questions?

You can speak to any member of your health care team. Do not hesitate to do so.

USEFUL RESOURCES

Heart and Stroke Foundation:
> heartandstroke.ca

Other health sheets published by the CHUM are available. Ask for those that might fit your situation.

You can also find them on our web site
chumontreal.qc.ca/votresante

Questions

The content of this document in no way replaces the recommendations and diagnoses made, or the treatment suggested by your health professional.

To find out more about the Centre hospitalier de l’Université de Montréal
chumontreal.qc.ca