

Endovascular Thrombectomy ('clot retrieval')

Information for parents and guardians

Your child is being considered for treatment with endovascular thrombectomy or 'clot retrieval'. To decide whether you wish your child to receive this therapy, you should understand enough about the possible risks and benefits to make an informed decision. You will have about 15 minutes to consider this. An interpreter will be provided if at all possible, within the time constraints of treatment.

Introduction

Most strokes are caused by loss of blood supply to a part of the brain. This is usually due to a clot in a blood vessel supplying the affected part of the brain. Dissolving the clot with Alteplase, which is given by injection into a vein in the arm, can restore the blood flow to the affected brain and may reduce the amount of permanent brain damage. However, Alteplase is not always able to dissolve clots, particularly if it is a larger clot. If this is the case, clot retrieval can be used to physically remove the clot and restore blood flow.

Most patients who undergo clot retrieval will have first been treated with Alteplase. Unless there is a dramatic improvement in symptoms, a test called a cerebral (brain) angiogram will be performed. The angiogram may be done under a general anaesthetic. The angiogram will show if there is a clot still blocking one of the arteries that supplies blood to part of the brain.

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An angiogram involves inserting a very small tube into an artery in the groin. The doctor then moves the tube toward the arteries in the brain guided by x-ray. Injections of contrast dye will be made through the small tube during this process. If a clot is seen, the doctor will try to remove it using the Solitaire clot retrieval device. Heart rhythm, blood pressure and breathing are carefully monitored during the procedure.

What are the possible benefits of clot retrieval?

Possible benefits may include prevention of permanent damage to the brain and reduction in the chances of suffering long-term disability from the stroke. Studies have shown that clot retrieval approximately doubles the chance of staying independent following a stroke.

What are the possible risks of clot retrieval?

Medical treatments often cause side effects. Most people have no serious side effects. However, some or all of the side-effects listed below may occur. These may range from mild to moderate or severe. Talk with your doctor or nurse if you are worried about them, or need more information. The doctor or nurse will also be looking out for side effects. Treatment may need to be stopped if a serious side effect occurs. It's important to notify the doctors or nurses if you notice any problems. The doctor will discuss the best way of managing any side effects.

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Risks related to cerebral angiograms and clot retrieval

- Bleeding at the angiogram puncture site in the groin causing bruising.
- Damage to the artery (making a hole or tear), blockage of an artery due to blood clot formation or breakage of the wires and small tubes used to perform the study. The occurrence of these events could make the condition worse or even cause a stroke. Generally, complications like these occur in 3 to 5 in 100 (3-5%) of all people having an angiogram for the purposes of clot retrieval.
- Bleeding into the brain. Your child will be observed very carefully for any signs that indicate bleeding, and a brainscan will be done to check for this, usually on the next day.
- Sedation and anaesthesia. A sedative and/or anaesthesia (which will make a person sleep with placement of a breathing tube in the throat), will be used if it is considered necessary for safety and comfort. The risk of anaesthetics and sedative agents include difficulty breathing, blood pressure lowering, and rarely life-threatening events. A specialist anaesthetist will be present during your care

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- Allergic reaction. Mild allergic reactions to contrast dye may occur in up to 2 to 4 in 100 people (2 to 4%) having angiograms. Severe reactions to contrast dye occur in 1 person in 1000. Your child will be monitored for all possible allergic responses during the procedure. There is also a risk of kidney problems or kidney failure after receiving contrast dye during the angiogram. Kidney function and individual risk factors will be evaluated before the angiogram. Fluids into the vein are given during these procedures to help avoid this problem.
- Radiation. Cerebral angiography involves additional radiation exposure. As part of everyday living, we are all exposed to naturally occurring background radiation and receive a dose of about 2 millisieverts (mSv) each year. The radiation dose from angiograms is about 3.5 mSv. At this dose level, no harmful effects of radiation have been demonstrated, as any effect is too small to measure.
- Having a drug injected or blood sample taken may cause some discomfort or bruising. Sometimes, the blood vessel may swell, or blood may clot in the blood vessel, or the spot from which tissue is taken could become inflamed. Rarely, there could be a minor infection or bleeding. If this happens, it can be easily treated.

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There may also be side effects that are not expected that may be serious.

It is important that the nurses or doctors are notified immediately about any new or unusual symptoms that develop

You can ask for any information you want

The decision whether or not to proceed with clot retrieval is up to you. If you choose your child not to receive this treatment you do not have to give a reason and you will continue to receive all standard care for stroke patients.

If you would like more information about clot retrieval or if there is any matter about it that concerns you, either now or in the future, do not hesitate to ask one of the clinical team treating you.