

CATHETER-DIRECTED THROMBOLYSIS

Information for patients

Introduction

- Catheter-directed thrombolysis refers to the use of catheter and thrombolytic drugs to dissolve the blood clots inside the blood vessel lumen to restore blood flow.
- The procedure will be performed in the Department of Radiology under imaging guidance and performed by radiologists with special training in Interventional Radiology. The procedure time is variable and could be up to 48 hours.

Procedure

- The procedure is performed under local anesthesia and aseptic technique. The puncture site is selected to provide the most direct route possible to the blood clot.
- A plastic sheath will be placed at the puncture site to facilitate catheters exchange.
- A baseline angiogram will be performed to document the extent and location of thrombus.
- A small catheter with guidewire will be used to cross the blood clot and administration of thrombolytic agents will be started after successful catheter placement. The agents currently used are urokinase, or recombinant tissue plasminogen activator (rt-PA). The drug will be administered either by small repetitive pulses, by continuous infusion or combination of both.
- You will be closely observed in intensive care unit or other high dependency unit for evidence of local or remote bleeding.
- The break down of blood clots will be monitored by interval angiography.
- After successful thrombolysis, balloon dilatation or metallic stenting of the blood vessels may be necessary.
- The sheath will be removed a few hours later after effect of the thrombolytic drug subsides. Alternatively a puncture-site closure device may be used.
- Thrombolysis will be terminated if failure or complications occur. The complications will be treated accordingly.

Potential Complications

Major bleeding (<8.4%)

- Intracranial hemorrhage (<1.1%)
- Retroperitoneal hemorrhage (0.3%)

Minor bleeding (6.3%).

- Distal migration of clot (5.2%)
- Amputation due to distal embolization (0.8%)
- Pericatheter thrombus formation (<5%).
- Concurrent re-thrombosis of artery (3.1%).

- Compartment syndrome – increased pressure inside compartments of the lower limb and may require surgery for pressure relieve (2%).
- Non hemorrhagic stroke (<1%).
- Pseudoaneurysm formation (an outpouch from the artery) at puncture site (<1%).
- Re-perfusion syndrome -- release of toxic substances into circulation after circulation re-established (0.7%).
- Vessel wall dissection (0.6%).
- Allergic reaction to drug (0.5%).
- Acute renal failure (0.3%).
- Sepsis (0.2%).
- Acute myocardial infarction (0.2%).
- Death (0.8%).
- The overall adverse reactions related to iodine-base non-ionic contrast medium is below 0.7%. The mortality due to reaction to non-ionic contrast medium is below 1 in 250000.

Disclaimer

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