RECANALIZATION OF DIALYSIS ACCESS

Information for patients

Introduction

- It is performed if there is clotting or narrowing in the dialysis access graft or dialysis fistula created in the native blood vessels.
- You may reuse the access for dialysis soon after the procedure. However, the problem may recur and another interventional procedure may be necessary. 80% of patients may still use the site for dialysis after 1 year.
- It will be performed by radiologists with special training in interventional radiology.
- It is usually performed in the Department of Radiology under image guidance, contrast medium will be used.

Procedure

- The radiologist will puncture your native vein or the graft with a needle. The direction of puncture will depend on the site of narrowing or occlusion. One sheath will be inserted if the aim is to dilate some narrowing. If the aim is to remove clots inside, two sheaths may be used.
- If the problem is narrowing, it will be dilated with a balloon catheter over a guidewire.
- A cutting balloon (balloon catheter with small blades on it) may be used in selected stenosis resistant to simple balloon dilatation.
- In patients with dialysis fistula, it may be difficult to reach the stenotic segment via the venous side. The radiologist may puncture your artery in order to introduce the balloon catheter to the stenotic vessel. The artery chosen may be the radial artery in the wrist or the brachial artery in the elbow.
- If there is clot inside the vessel, it may have to be dissolved with infusion of drugs into the vessels (thrombolysis), the clot may also be removed or broken down by mechanical means (mechanical thrombectomy). Clot formation and narrowing frequently co-exist.
- In thrombolysis, one or two catheters will be placed inside your vessel for drug infusion, which may last from one hour to more than 24 hours, depending on the age of the clot. There are specific procedures and complications associated with thrombolysis. Please refer to the patient information leaflet on this aspect.
- In mechanical thrombectomy, a special device of 2 to 3 mm diameter will be inserted to break down or aspirate the clot. Big clot will be broken down to very small pieces and some small clots may flow to the arteries in the lung.
- After the procedure, aspirin or other drugs may be used to prevent re-clotting. Your vital signs (like blood pressure and pulse rate) will be monitored.

Potential Complications

- Minor venous injury (<35%).
- Clotting and occlusion of the fistula during or after the procedure (<7%).

- Pseudoaneurysm (<6%).
- Vein rupture resulting in loss of access (<4%). The risk of rupture increases in dilatation with cutting balloon.
- Arterial injury or occlusion in arterial puncture, causing loss of blood flow to the hand.
- Systemic bacterial infection (<3%).
- Big hematoma (<3%). This may compress on the adjacent stricture like nerve, causing impairment of motor or sensory function.
- Loss of blood flow to hand because some clot flows into the native circulation. Emergency surgery will be necessary. (<2%)
- Symptomatic clot occlusion of pulmonary artery (<1%).
- Heart attack or pulmonary edema because of fluid overload during the procedure (rare).
- Procedure related death is rare.
- 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.
- Other complications related to thrombolysis (please refer to patient information leaflet on thrombolysis).

Disclaimer

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