

**Introduction**

Creation of Arteriovenous (AV) Fistula is necessary for patients on long-term hemodialysis. It usually takes 4-6 weeks for the Fistula to mature. On maturity, the vein becomes stronger and can better withstand repeated needle punctures. A functioning and well maintained AV Fistula is crucial for the success of hemodialysis.

**The Operation**

Doctor will join an artery and a vein on patient's forearm under local or general anesthesia, as a minor surgery.

**Preoperative Preparation**

1. Admit 1 day before or on same day as an "elective" case.
2. Anaesthetic assessment. **Inform your doctors** about drug allergy, regular medications or other medical conditions.
3. Keep fast for 6 to 8 hours before operation.
4. The surgeon will evaluate the distribution of blood vessels in the patient's arm and determine which arm is more suitable for the operation. Do not draw blood, or administer IV injection on this arm.
5. Clean the Fistula limb before the procedure.
6. Empty bladder and change to operation clothes before transfer to operating room.
7. Aspirin, anti-platelet agents and warfarin / anticoagulants may need to be withheld before the surgery according to doctor's instruction.
8. Pre-medication, antibiotic prophylaxis and intravenous line may be required.

**Postoperative Instruction****General**

1. Mild discomfort or pain over the operation site. Inform nurses if more analgesics are required.
2. Nausea or vomiting are common if GA is applied; inform nurses if symptoms severe.
3. Can mobilize and get out of bed 6 hours, and usually go home on day 2, after the operation.
4. Resume diet, usually 4 hours after anesthesia, and when taking sips of water well.

**Wound care**

1. Keep the wound dressing dry. Change by nursing staff if it became wet or dislodged.
2. If the operation is successful, blood from the artery will be shunted to the vein and vibrations can be felt at the site of operation.
3. Forearm will have some swelling after operation. When lying in bed, elevating the arm by placing it over a pillow helps to relieve the swelling. Be careful not to put the pillow over the site of operation, or else blood flow may be affected.

**Common Risks and Complications** (not all possible complications are listed)**Anesthesia related**

1. Cardiovascular: myocardial infarction or ischemia, stroke, deep vein thrombosis, pulmonary embolism, etc.
2. Respiratory: atelectasis, pneumonia, asthmatic attack, exacerbation of chronic obstructive airway disease.
3. Allergic reaction and shock.

**Procedure related**

1. Wound bleeding, haematoma formation, infection and abscess.
2. Ischemia /swelling of the hand / thrombosis of the fistula.
3. Aneurysm and pseudo-aneurysm formation.
4. Infection of the fistula.
5. Heart failure.

**Things to take note on discharge**

1. Do not draw blood, take blood pressure, or administer intravenous injection or infusion on the Fistula arm.
2. Do not wear clothes with elasticized sleeves at the cuff, jewelry, watches or bracelets on the Fistula arm.
3. Do not carry anything heavy with the Fistula arm or do any vigorous physical exercises.
4. Check for inflammation at Fistula site, such as redness, a feeling of excess warmth or pain.
5. Check the blood pressure. When blood pressure is low, lie down and inform the health care professionals.
6. The patient should take good care of the Fistula to prevent excessive bleeding. If there is injury to the Fistula with bleeding, use the other hand to press on it. Raise your arm and inform health care professionals.
7. After healing of the wound (in about 10 days) and without any abnormalities, the patient may exercise the arm 4-5 times every day to increase blood flow in the Fistula. Do the exercise by clenching the fist (with or without a ball) for 10 seconds and relax. Repeat for 10-15 minutes.
8. If wound heals in 14 days, sutures will be removed and the patient can wash hands as usual.

**Remarks**

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For further information please contact your doctor. Evangel Hospital reserves the right to amend this leaflet without prior notice. We welcome suggestions or enquiries on the information provided in this leaflet. Please contact our Healthcare professionals so that we could follow up and make improvement.

**Reference**

Hospital Authority: "Information on Arteriovenous Fistula" (2021)  
Smart Patient: [https://www.ekg.org.hk/pilic/public/IMS/PILIC/IM/AVFis/0084\\_eng.pdf](https://www.ekg.org.hk/pilic/public/IMS/PILIC/IM/AVFis/0084_eng.pdf) (24-07-2023)