EMBOLOTHERAPY FOR PULMONARY ARTERIOVENOUS MALFORMATION

Information for patients

Introduction

- Pulmonary arteriovenous malformations (PAVM) are rare pulmonary vascular anomalies with abnormal direct communication between the branches of pulmonary arteries and pulmonary veins, which can cause shortness of breath, expectoration of blood, chest pain, stroke, brain abscess and heart failure.
- Embolotherapy is a procedure to treat this condition by occluding the abnormal communication between the branches of pulmonary arteries and pulmonary veins.
- Long-term cure of the PAVM can be achieved in 98-99% of the patients.
- This procedure is performed by a radiologist with special training in interventional radiology. It will be performed in the Department of Radiology under imaging guidance.

Procedure

- Before the procedure, blood tests, chest X-ray, computer tomography (CT) and preliminary pulmonary angiogram may be performed to delineate the vascular structure and the number of PAVM.
- The procedure may be performed under local or general anaesthesia, depending on the clinical conditions.
- A small catheter is inserted into the femoral vein at your groin and is directed through your heart into the branches of the pulmonary arteries.
- Metal coils will be deployed at the PAVM, and thus occluding the abnormal vascular communications in the PAVM.
- The procedure usually requires 2-4 hours, depending on the size and number of PAVM.
- After the procedure, your vital signs such as blood pressure, pulse rate, and oxygen saturation of blood will be closely monitored.
- There will be follow-up chest X-ray and computer tomography to assess the stability of the inserted devices and the efficacy of treatment.
- More than one treatment session may be required if there are multiple supplying artery to the PAVM or there are multiple PAVMs.

Potential Complications

- Pleuritic chest pain: usually self-limiting and responds well to analgesics. It usually occurs in the first 24 to 48 hours and lasts 3-6 days (common).
- Fever (common).
- Air embolism: can cause chest pain and abnormal cardiac rhythm, but usually responds to treatment (<5%).
- Embolization of coils into systemic circulation: may cause occlusion of the major arteries to the brain, limbs and other organs, resulting in ischemic damage to these organs (<5%).
- Coil migration within the pulmonary circulation (rare).

- Pulmonary hypertension (very rare, may occur if there are arteriovenous malformation in other organs).
- Pulmonary Infarction (rare).
- Thrombosis of femoral vein (rare).
- Stroke (rare).
- Vascular and heart damage by catheters or guidewires (very 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 250 000.

Disclaimer

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