



## **Cerebral Digital Subtraction Angiogram – Patient Information Sheet**

### **Introduction**

Cerebral Digital Subtraction angiogram is a special X-ray examination of brain, head and neck blood vessels to diagnose underlying vessel problems. This examination will be performed under X-ray guidance by Radiologist and or neuro-interventionist.

### **Preoperative preparation**

1. Your doctor will explain the reason, the procedure, the possible risks and complications to you. You have to sign a consent form for this investigation. You should volunteer information to your doctor on history of allergy to food and drugs, history of asthma, urticaria, eczema and allergy to contrast medium. Also, you should inform our staffs if you are pregnant or breast feeding.
2. You will have a blood test to check any bleeding tendency and correct if possible.
3. Skin preparation and shaving of the puncture site.
4. No food or drink is allowed 6 hours before examination.
5. Please void before going to X-ray department.
6. Remove loose objects (e.g., underwear, dentures, jewellery and contact lens etc.) and change to operation attire one hour before the procedure.
7. For diabetic patient on drug, consult doctor for the adjustment of insulin dosage if necessary.

### **Procedure**

1. This procedure is performed under local anaesthesia or general anaesthesia and aseptic technique.
2. The radiologist will puncture a blood vessel at your groin region with a needle. After the needle is correctly positioned, a slender guide wire is placed through the needle into the blood vessel. The needle is then withdrawn, allowing the catheter to be placed over the guide wire into the blood vessel.
3. The X-ray equipment will then be used to navigate the catheter into your neck region and contrast medium will be injected through the catheter and X-ray taken.
4. As the contrast medium passed around your head, you may get a warm feeling over your head and facial region, which will soon pass off.
5. During the procedure, you are advised to listen carefully to the instructions given by our staffs.
6. The duration of the procedure is different for every patient, it depends on the complexity of the condition.
7. At the end of the procedure, the catheter is removed and puncture site is compressed to stop bleeding.

## Care & Advice

1. After the catheter was removed, the puncture site will be compressed for at least 10 minutes in order to stop bleeding.
2. Nurse will monitor for any secondary bleeding and swelling at the puncture site.
3. Nurse will monitor the blood pressure, pulse, or neuro-observation.
4. You need to have bed rest for several, avoid vigorous movement to prevent bleeding over the puncture site.
5. You may need to continue to fast or take diet as tolerated depending on your condition.
6. For diabetic patient on drug - consult clinician concerned for the adjustment of insulin dosage if necessary.

## When the patient is released home, he or she is advised to:

1. The puncture site will be inspected before discharge. Please keep the wound clean and dry for 24 hours.
2. Avoid vigorous activities in the first few days after the procedure.
3. Once diet is resumed, please take more fluid to help eliminate contrast through urine if allowed by your doctor.
4. If bleeding from the puncture site occurs after discharge, press on the puncture site for 15 minutes and notify your doctor. If your doctor cannot be reached, come to the Out-patient Department of the St. Teresa's Hospital.

## Potential complications

1. Overall death related to cerebral angiography is less than 0.1%.
2. Overall incidence of major complications of cerebral angiography is less than 1%.
3. Major complications include:
  - Permanent neurological deficit
  - Groin or retroperitoneal haematoma requiring transfusion or surgery.
  - Arterial occlusion requiring surgical thrombectomy, stenting or thrombolysis.
  - Arteriovenous fistula / pseudoaneurysm at puncture site.
  - Contrast media associated nephrotoxicity.
  - 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.
  - Breakage and knot forming of catheter or guidewire is very rare, this may require surgical removal.
4. Minor complications include:
  - Groin bruise and pain.
  - Complication related to contrast medium injected – rash, urticaria.
  - Transient neurological deficit which is reversible within 24 hours (weakness, numbness)
  - Transient visual loss

**This document is for information purpose and is not intended to be a substitute for the advice of a doctor. Should you have any queries, please consult your attending doctor.**