Transarterial Chemo-Embolization (TACE)

Procedure Information Sheet

Introduction
1. Hepatocellular carcinoma (HCC) is one of the most common malignancies in Hong Kong. Only a portion of patients can benefit from curative surgical treatment.
2. Transarterial Chemo-Embolization (TACE) is an alternative or adjunct measure to unresectable hepatocellular carcinoma. Depending on the stage of tumour, TACE may be curative or palliative.
3. This procedure is performed by radiologists with special training in interventional radiology in the Department of Radiology under image guidance.

The Operation / Procedure
1. Before the procedure, you will be given fluid through the intravenous line, antibiotics to prevent infection and drug to relieve vomiting.
2. The procedure is performed under local anaesthesia. The femoral artery at groin region is punctured for arterial access.
3. Preliminary angiography is performed for depiction of vascular anatomy before embolization, and is also for confirming the patency of portal vein. The arteries supplying the tumor are selectively catheterized, including the hepatic arteries and other extrahepatic collateral arteries, such as arteries supplying the diaphragm or chest wall. In order to spare normal liver tissue, superselective catheterization with a smaller catheter through the original catheter may sometimes be required.
4. The chemotherapeutic mixture and the embolic material are then injected through the catheter. Following delivery of the chemotherapy mixture, small gelfoam particles may be injected to reinforce the effect of treatment.
5. The procedure usually requires 1 to 2 hours.
6. After the procedure, your vital signs, urine output and liver function will be monitored. Diet can be resumed if the vital signs are stable.
7. You may feel nausea or vomit, have abdominal pain and low grade fever in the first few days. You will be given antibiotics if there is clinical sign of infection. Drugs will be given for vomiting and pain.
8. You will be discharged if there is no signs of infection and your liver function is stable. You will then be followed up in the out-patient clinics and with imaging studies (CT or MRI).
9. Depending on the response of the tumor to treatment and on your general clinical condition, more sessions of TACE may be arranged.

Before the Operation / Procedure
1. A written consent is required.
2. Please inform our staff before the examination if the patient thinks she is pregnant.
3. Check bleeding parameters, to be corrected if problem detected.
4. Fast for 4 hours before examination.
5. Antibiotic cover prior to examination when necessary.
6. Check history of allergies and give steroid if necessary.
7. For diabetic patients on Metformin medication, patient should inform medical staff before examination.
8. Set up venous access.
Risk and Complication

1. Post-embolization syndrome (80-90%). It consists of fever, nausea, vomiting, right upper abdominal pain, sluggish bowel motion, and elevated serum liver function tests. This syndrome is self-limited, which usually lasts for few days.
2. Injury to the main supplying artery, such as coeliac or hepatic arteries, which may prevent further TACE (<2.7%).
3. Occlusion of supplying arteries after repeated TACE, making further TACE difficult or impossible.
4. Bile duct injury causing bile duct stricture or dilatation, accumulation of bile inside the liver (biloma formation) – especially after repeated TACE (3%).
5. Liver abscess (0.2%).
6. Liver failure and infarction (rare). The condition is dependent on the preprocedure liver function of patients.
7. Tumour rupture (rare).
8. Gall-bladder infarction/ ischaemia due to occlusion of the artery to the gall bladder (rare).
9. Non-target embolization to the gut leading to bowel infarction (rare).
10. Pulmonary oil embolism: leading to lower blood oxygenation and shortness of breath. This may occur 2-10 days after TACE. It is rare and depends on the amount of lipiodol given.
12. Drop in platelet count and haemoglobin level (rare).
13. If mixture has to be given in the extrahepatic collateral arteries, other side effects may occur, this may include:
   13.1 Shoulder pain
   13.2 Skin rashes
   13.3 Skin necrosis
   13.4 Spinal cord injury (very rare)
   13.5 Fluid accumulate in pleural cavity
   13.6 Pus in pleural cavity
14. Complications relating to groin arterial puncture and catheter manipulation, such as big clot formation, arterial injury, occlusion of arteries in the lower limb (uncommon).
15. Procedure related death (rare).
16. 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. Should a complication occur, another life-saving procedure or treatment may be required immediately.

Disclaimer

This leaflet only provides general information pertaining to this operation / procedure. While common risks and complications are described, the list is not exhaustive, and the degree of risk could also vary between patients. Please contact your doctor for detailed information and specific enquiry.

Reference

2. Smart Patient Website by Hospital Authority: Transarterial Chemoembolization (TACE)

Patient’s Label
Patient Name:___________
Hospital No:___________
Adm No/Episode No:_______

Patient’s Signature:____________ Date:____________