

Introduction

Computed Tomography (CT) makes use of a rotating x-ray device together with computer technology to create detailed cross-sectional images of the body, thereby providing diagnostic information for suspected pathology.

The Examination

1. The whole procedure is monitored by Radiologist.
2. During the examination, the patient will be lying on the table of the CT scanner. The table will then carry the patient slowly through the gantry of the scanner and a well-collimated X-ray beam will pass through the patient. Several cross-sectional images of the organs / areas are then made.
3. Intravenous or oral contrast medium may be needed to improve the diagnostic quality of the images.
4. Medication for sedation is sometime administered to paediatric patients to obtain clear images.
5. The examination usually takes less than an hour, but some occasionally may need more time.

Before the Examination

1. An informed written consent is required for all CT exams entailing injection of contrast medium.
2. Patients younger than 18 should be accompanied by their parents /relative. The consent form should be signed by their parents / legal guardian.
3. For CT examination with contrast medium injection, inform the attending doctor if you have a history of adverse reaction to intravenous contrast medium. The doctor may prescribe steroid premedication before injection of contrast medium.
4. For abdominal examinations with administration of intravenous contrast medium, fasting at least 4 hours before the examination.
5. For diabetic patient on drugs - consult the clinician concerned for the adjustment of dosage if necessary.
6. All metallic objects (e.g. watches, jewellery, ear rings, hair pins... etc.) should be removed before the examination and kept in safe place by yourself.
7. During CT scanning, keep still and listen carefully to the instructions given by the radiology staff.

Risk and Complication of Contrast Medium

In general, contrast medium is a safe drug. However, side effects may occasionally occur.

1. General Risks:

- **Mild reactions:** For example, itching, mild skin rash, nausea, vomiting, feeling of warmth, arm pain, sneezing, coughing, and chest tightness. A few patients may experience delayed reactions usually within 24 hours, which include pain at injection site, itching, rash, painful or swollen salivary glands. The symptoms are usually transient, requiring minimal or no treatment.
- **Moderate reactions:** These symptoms are more severe and last for a longer duration. Patient may experience rash or urticaria, fever and chills, an increase or decrease in blood pressure and palpitation. Specific treatment and close monitoring are required.
- **Severe reactions:** The symptoms include shortness of breath, irregular heartbeat, chest pain, severe kidney failure, convulsion and unconsciousness. If these symptoms occur, the patient will require urgent medical treatment.

2. Special Risks:

- **Contrast extravasation:**
During intravenous contrast injection, contrast extravasation may occur. The patient will feel discomfort or pain at the injection site, requiring treatment and monitoring.
- **Aspiration of gastric content or oral contrast medium may lead to pneumonia.**
- **Death:** Contrast medium may cause severe allergic reaction and leading to death but it is extremely rare.

Patient's Label
Patient Name: _____
Hospital No: _____
Episode No: _____



Information on Computed Tomography

For Women of Child-bearing Age:

1. Female patients aged between 10 to 60 years (excluding patients with previous hysterectomy) need to sign the consent form before examination.
2. Inform medical staff before the examination if the patient is or may be pregnant as the examination involves a high dose of X-ray that is harmful to a fetus. A pregnancy test may be necessary in case of any doubt regarding the examination has to be proceed.
3. No contraceptive method is 100% effective.
4. You should also tell our nurse or radiographer the date of your last menstrual period (LMP).
5. You may be offered a pregnancy test (blood or urine) if necessary. However, please note pregnancy tests CANNOT exclude the possibility of a very early pregnancy.
6. We will assess your likelihood of being pregnant, based on the available information.
7. If you are pregnant or if the possibility of pregnancy cannot be excluded, doctor will re-assess the potential risk and benefit of performing this radiological examination to you and your fetus.
8. If the benefit of performing this radiological examination is greater than the risk, we may continue with this examination if you agree. It is your right to decide whether you want to continue with this examination.
9. If the risk of performing this radiological examination is greater than the benefit, we may consider arranging alternative investigations which do not use radiation, or to reschedule this examination.
10. After the examination, in the case that you realise you might have already been pregnant on the date of this examination, please consult your clinical doctor for advice as soon as possible.

Risks to your fetus

1. Risk of radiation:
 - The actual risk of radiation to your fetus depends on its gestational age and the radiation dose received by the fetus. The radiation dose varies according to individual examinations. Our radiographer will keep the radiation dose as low as possible to reduce risk.
 - Theoretically, a very high dose of radiation can cause fetal death (miscarriage), malformation, growth retardation, or impairment of mental development. In practice, the radiation dose to fetus that normally results from diagnostic radiological examination is unlikely to cause these harms.
 - Radiation exposure to the fetus may slightly increase the possibility of cancer later in the child's life.
 - The risk of radiation induced hereditary disease to the fetus descendants is very small.
2. Risk of iodinated contrast
 - You may be given intravenous iodinated contrast during the examination. There is insufficient evidence to conclude whether injected iodinated contrast causes risk to the fetus.

After the Examination

Eat or drink as usual after the examination.

Disclaimer

This leaflet only provides general information pertaining to this examination. 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

Smart Patient Website by Hospital Authority: Contrast study for computer-assisted tomography scan (2020);
Radiological Investigation Information to Women of Child-bearing Age (2019)

Signature of Patient: _____

Date: _____

Patient's Label

Patient Name: _____

Hospital No: _____

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