

Contrast Study for Computer-Assisted Tomography (CT) Scan



Figure 1. CT machine

What is this procedure?

CT scan is a special form of X-Ray investigation. Contrast Study means taking the image after injection of something called “contrast medium”.

Why is there a need to do it?

Compared with a plain CT image without contrast medium, adding contrast medium can make the image clearer so that it is easier for the doctor to locate the abnormality, if any.

How is it done?

The contrast medium, which acts like a dye, after injection into the blood vessel, will be brought to various organs. It is basically a substance which has the capability to weaken X-rays. When the radiation beams pass through the organ containing the contrast medium, some of the X-ray penetration will therefore be weakened by the contrast. As a result, the organs or the tissues that contain the contrast medium can be made more obvious by standing out against the background.

Risks and complications

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

General risks:

- Mild reactions:
These include feeling of warmth, itching, nausea, vomiting, arm pain, sneezing, coughing, and chest tightness. A few patients may experience delayed reactions usually within 24 hours, which include pain at injection path, itching, rash, painful or swollen salivary glands. The symptoms are usually transient, requiring minimal or no treatment.
- Moderate reaction:
The symptoms are more severe and last for longer duration. Patient may also

experience rash or urticaria, fever and chills, an increase or decrease in blood pressure and palpitation. Specific treatment and close monitoring are required.

- Severe reaction:
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.

Specific risks:

- Contrast extravasation:
During intravenous contrast injection, contrast extravasation may occur. The patient will feel discomfort or pain at the injection site.
- Death:
Contrast medium may cause death by causing severe allergic reaction, but this is extremely rare

Possibility that the procedure cannot be carried out

There is also a possibility that the procedure cannot be carried out, for example, if patient's condition is unstable and not fit for transfer, or if intravenous access cannot be set up.

Other treatment options

If the patient chooses not to perform this procedure, it will affect the overall condition. The change of the condition is affected by a variety of clinical factors, including the individual patient's physical condition before the onset of illness, the type of disease, the response to treatment and the progress, etc. Your doctor will explain other suitable options to you.

Disclaimer

The information provided in this booklet is for general reference only. The risks and complications listed above are not exhaustive. Please consult your attending doctor for details.