

## Computed Tomography Including Intravenous Contrast Injection (For Paediatric Patients)

### Indication

It is to provide diagnostic information for suspected pathology in specific organs or areas of the body.

### Procedure

During the examination, the patient lies on the table of the CT scanner. The table then carries the patient slowly through the scanner and X-Ray beams pass through the patient. In this way, a number of radiological images of the organs/areas of interest are made. Intravenous contrast media are commonly used to improve the diagnostic quality of the images. The patient is advised to keep still during CT scanning and listen carefully to instructions given by medical staff. Medication for sedation is sometimes administered in order to obtain images without undue movement.

### Possible Complications

1. Allergic reaction to intravenous contrast medium.

Generally speaking, contrast medium is a safe drug. However, side effects may occasionally occur. The types of reaction patient may have are:

**MILD REACTION**: Limited urticaria / itchiness, nausea, vomiting, sneezing, coughing, feeling of warmth at injection site, conjunctivitis, rhinorrhea, etc. The symptoms are usually self-limited and usually no medical management is required.

**MODERATE REACTION**: Diffuse urticaria / itchiness, facial oedema, throat tightness or hoarseness without shortness of breath, mild wheezing, chest pain, abnormal blood pressure, etc. The symptoms are more pronounced and medical management is commonly required.

**SEVERE REACTION**: Difficulty in breathing caused by diffuse, facial or laryngeal oedema and bronchospasm; severe hypotension or hypertension, irregular heartbeats, convulsion, etc. These are often life threatening and can result in permanent morbidity or death if not promptly treated. Very rarely, contrast medium can cause death.

**DELAYED REACTIONS**: Delayed adverse reactions may occur from one hour to up to one week that follows the contrast medium injection. These are commonly skin reactions and include urticaria, rash and itchiness. Rare delayed reactions include iodide “mumps” and acute joint pain.

In order to reduce the risk of contrast reaction, please inform the medical staff if your child has a history of allergy/atopia requiring medical treatment, asthma or previous contrast reaction, so that appropriate measures could be instituted.

2. Extravasation of contrast media is a potential complication and is due to leakage of contrast media to soft tissue adjacent to the injection site. Extravasation of small amount of contrast media may result in swelling and/or pain, and is commonly self-limited. More severe injuries may result in skin ulceration, tissue necrosis and compartment syndromes.
3. Risk of contrast-induced nephrotoxicity can occur.
4. Rare cases of underactive thyroid in infants given iodine-containing contrast agents for medical imaging have been reported. This potential adverse effect is usually temporary and resolves without treatment or any lasting effects.
5. Diabetic patients taking Metformin have the potential risk of developing lactic acidosis following contrast medium injection, in particular in patients with impaired renal function.
6. There is also a general risk of radiation. *Please inform medical staff if you think your child is pregnant.*

### Remarks

The list of complications is not exhaustive and other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For any queries or further information, please consult our medical staff.