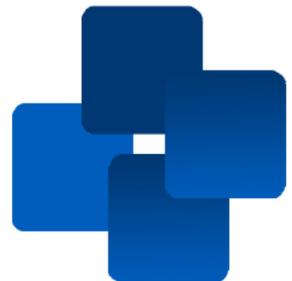


Patient Information

Computerised Tomography (CT) Brain Scanning in Head Injury

Children's Services



Computerised Tomography (CT) Brain Scanning in Head Injury (to be used in conjunction with Head Injury in Children - Parents Information Sheet)

Introduction

The purpose of this leaflet is to explain what a CT scan is and why and when a CT scan is needed.

What is a CT Scan?

A CT scan is the use of specialised X-ray (a form of radiation) and computing to enable an image of the contents of the skull to be obtained, to look for areas of bleeding (haemorrhage), bruising or tissue damage, as well as showing up skull fractures. The radiation dose is relatively small but, consideration to the risk of this dose of radiation must be made and judged against the risk of missing some serious problem in the brain if the scan is not done.

When is a head CT needed?

A head (brain) CT should be performed when there is concern about a serious brain injury. However, unnecessary use of CT exposes children to radiation and should be avoided if possible.

A head (brain) CT may be recommended if there are concerning signs or symptoms of brain injury following a head injury, during the examination and observation of your child. These include the following :

- Prolonged loss of consciousness
- Persistent or severe memory loss, confusion
- Persistent vomiting
- Seizure
- Severe, persistent, or worsening headache
- Suspicion of intentional injury or non-accidental injury (abuse)
- Behavioural changes e.g. lethargy, decreased alertness, extreme irritability

- Signs of a skull fracture or bulging fontanelle (soft spot on an Infant's head)
- Abnormal neurological examination
- Significant scalp bruise or swelling in an infant under one year of age
- Incident with a higher risk of brain injury e.g. high speed motor vehicle involved as passenger or pedestrian, fall from a height of greater than 1.8 metres

Why is CT best?

Head (brain) CT is recommended to evaluate head injuries because it is very fast, available in most hospitals and is good at identifying recent, severe injuries. Young children may need to be sedated briefly (less than 15 minutes in most cases) to obtain the best results.

Magnetic Resonance Imaging (MRI) of the brain is not the test of choice for recent brain injury. In addition, in most hospitals, it is not usually available quickly. MRI requires the child to remain completely still for at least 30 minutes, which often requires prolonged sedation or general anaesthesia.

Observation

In some cases, it is not initially clear if a head CT is needed. Some children with vomiting, headache, or a brief loss of consciousness (without other symptoms) have a traumatic brain injury while others do not.

In these cases, one reasonable strategy is to observe the child closely for four to six hours after the injury, usually in the emergency department. If the child develops any other symptoms, a CT scan could be done at that time. If no further symptoms occur, the child does not usually need a CT scan. Children who are well more than eight hours after a head injury have a low risk of brain injury that requires surgical intervention.

Further information

NHS 111

☎ 111

or Contact your GP

NHS website - www.nhs.uk

Useful Telephone Numbers

Bluebell Ward, Lister Hospital
Stevenage

☎ 01438 284008

Children's Emergency Department
Lister Hospital

☎ 01438 284333

Urgent Care Centre, New QEII
Welwyn Garden City

☎ 01707 247549

Community Children's Nursing Team

☎ 01438 288370