

Family Medicine Clerkship Plain Language Summary

Title: A bump on the head: Does my child need a CT image of his or her brain?

Name: Anna M. Larson

Plain Language Summary:

Falls and bumps, scrapes and cuts, these common injuries are a typical part childhood. As parents and caregivers, we clean the wounds and bandage the hurts and very soon the child is all healed up and back to normal. But when it comes to the head, it can be harder to know what to do. These types of injuries can be very worrisome for families. As a general rule, if a child falls from a significant height and hits his or her head, or if they get hit in the head with something that is moving very fast and/or something that is very hard like a baseball or golf ball, the child should be seen by a doctor. With a bump to the head, the biggest thing that we worry about is an injury to the brain. Typically, this would be bleeding or bruising in the brain, or bleeding into the space around the brain. By looking at a child and doing some special tests, doctors can often learn a great deal about how well the brain is working and if it has been hurt. However, because sometimes doctors might not be sure about how the child is doing after the injury, they might need to try to get more information. One way to get more information about the brain is with special type of X-ray, or a picture of the brain inside of the head. This is called a CT image. A CT can often show the doctor if the brain is bleeding or if it has been bruised from when the child fell or was hit on the head. Additionally, this kind of X-ray can give us more information about how hard the child hit their head as well as help doctors decide if the child needs surgery or some additional medications to help them heal.

“Why don’t we get a CT image of the brain of every child who has an injury to his or her head?”

One reason is because, as opposed to a regular photograph, during a CT image, the child is exposed to a very low amount radiation. This exposure puts the child at a slightly higher risk of developing cancer later in life. It is a very small change in risk, but doctors need to keep it in mind when they are deciding whether or not to get a CT image for a child. Also, it is very important for parents know that most accidents involving the head, in children do not cause bleeding or bruising to the brain. It is very rare for this to happen. Therefore, we don’t want to put all children who bump their head at the increased risk for cancer, especially those who are the least likely to have a more serious injury to the brain. The child’s behavior after a head injury, along with the information about the type of injury that they had, can really help doctors know if a child does not have bleeding or bruising to the brain. These children can be safely sent home and watched carefully with some instructions about when to come back to see the doctor. But, for the children who have had certain types of injuries or who have some specific types of changes in the way that they are acting, doctors may be more suspicious about injury to the brain and will want to get a CT to provide more information. Some of these important clues for the doctor in helping them make the decision about whether or not a child should have a CT, can be provided by the caregivers who were with the child at and after the time of injury. Some important questions that your doctor might want to talk about are included in the following table.

Type of head injury				
Did the accident involve a car going faster than 40 miles per hour?	Yes	No	Don't know	NA
If the child is younger than 2 years old, was the fall over the height of a kitchen table (3 feet)	Yes	No	Don't know	NA
If the child is older than 2 years old, was the fall over the height of a basketball hoop (3 meters)	Yes	No	Don't know	NA
Was the child hit in the head with something moving very fast? (examples: golf ball, firecracker, BB gun, potato gun)	Yes	No	Don't know	NA
Child's behavior after the head injury				
Did the child pass out or have loss of consciousness for more than 5 minutes?	Yes	No	Don't know	NA
Has the child had any trouble remembering what happened before or after they hit their head?	Yes	No	Don't know	NA
Did the child throw up more than 3 times?	Yes	No	Don't know	NA
Did the child have a seizure ? A seizure is an event that may last a few second to several minutes; the child may have been very stiff or had shaking in one or both arms and legs. Their eyes may have been open but they might not have been able to hear or respond their name during event.	Yes	No	Don't know	NA

Additional Resources:

After the Injury, helping parents help their kids recover

The Children's Hospital of Philadelphia

<http://www.aftertheinjury.org/head-injury>

Head/Brian Injury

Children's Hospital Boston

<http://www.childrenshospital.org/az/Site985/mainpageS985P0.html>

Key Words:

Head injury

Pediatrics

CT imaging

This document was created by a medical student enrolled in the Family Medicine Clerkship at the University of Minnesota Medical School as part of the course project. The aim of the project is to present information on a medical topic in the format of a patient education handout. It does not necessarily reflect the views of the University of Minnesota Medical School physicians and faculty. These materials are provided for informational purposes only and are in no way intended to take the place of the advice and recommendations of your personal health care provider. The information provided may no longer be up-to-date since it has not been reviewed since the date of creation. The information provided should not be used to diagnose a health problem or disease, or as a means of determining treatment. In the event of a medical emergency, immediately contact a doctor or call 911.

