Phalangeal Neck (Finger) Fracture

The hand is the most often injured body part in children. Finger fractures (breaks), especially phalangeal neck (finger) fractures, often happen because of a direct hit to a finger. Many times, this injury happens while a child is playing volleyball, basketball, and other sports. These fractures almost always occur in children.

Symptoms

When a phalangeal neck fracture occurs, there is usually:

- Pain in that finger
- Swelling
- Bruising
- Loss of motion in that finger

Diagnosis

X-rays of the finger are taken to see if there is a fracture and to rule out other injuries (Picture 1).

Treatment

Many fractures in children can be fixed with a cast or a splint, but these are different. The muscles and tendons of the finger often pull the bone pieces farther apart than the original injury, which is what makes this a very unstable injury. Without surgery the bones may not heal correctly, causing stiffness or arthritis when the child is an adult, or avascular necrosis. Avascular necrosis means the bone dies because it does not have a good blood supply.

Phalangeal neck fractures will often need a surgery called closed reduction (to put the bone pieces back together) and percutaneous (through the skin) pinning. Surgery is done in an outpatient setting.

Continued on page 2
Treatment, continued

- First, the surgeon will use an x-ray machine in the operating room to reduce (set) the fracture.
- The surgeon will then insert pins to hold the pieces together until the bone heals (Picture 2). The ends of the pins on the outside of the skin are bent (Picture 3).
- At the end of surgery, your child’s hand will be protected in a cast or a splint.

Possible surgical complications can happen. Altogether, the risks amount to less than 1 percent. These include, but are not limited to, bleeding; infection; harm to the surrounding hand or fingers; bone pieces that do not heal together or heal in the wrong position; broken or rotated hardware (such as pins); pins or a fracture that moves; stiffness; deformity; wound healing problems; bone death; and need for further surgeries.

Follow-up

Your child may be seen in the orthopedic clinic one week after surgery if he or she was placed in a splint. At this visit, we will take x-rays of the finger, check the pins and change from the splint to a cast.

Four weeks after surgery we will see your child back in clinic. The cast will be removed, x-rays taken, and the pins removed. There may be minimal discomfort during quick pin removal. We recommend that you give your child Tylenol or Motrin in the lobby before this appointment to help minimize discomfort. For more information on pin removal, please see Helping Hand HH-I-415, Percutaneous Pinning.

Your child’s repaired finger will be “buddy-taped” to a finger next to it before the child leaves the clinic. “Buddy-taping” helps to protect the repaired finger from being bent backward and also helps to get the fingers moving. The fingers should remain buddy-taped for at least 2 weeks, or until full motion returns.

You will be shown how the tape should be applied and given extra tape to take home. The tape may be changed when it is dirty or is falling off and for baths or showers. Your child will be seen back in clinic 3 to 4 weeks after the pins have been removed. Finger motion will be checked and there may be one last x-ray. If your child is having trouble with moving the finger at this point we may have him or her see one of our hand therapists to help with finger motion.
When to call the clinic

Contact the orthopedic clinic if any of these things occurs:

- The splint or cast gets soiled, wet, or starts falling apart.
- There is redness, swelling or drainage at the pin sites.
- Fingers are not pink and warm.
- Your child is crying more than usual or is in pain.
- Your child has a fever over 101 degrees F after surgery.

Clinic contact information:

- Clinic hours are Monday through Friday, 8:00 am to 4:30 pm. The phone number is (614) 722-5175. Ask for the nurse to discuss any symptoms.

Be sure to contact the clinic if you cannot keep any follow-up appointments.