Bone Bruise, Osteochondral Lesions,
Occult Trabecular Microfracture

A bone bruise is a small hidden fracture of the bone. It typically occurs with bones located close to the surface of the skin.

DIAGNOSIS

It can only be seen on special X-rays known as MRI's. This stands for Magnetic Resonance Imaging. A regular X-ray taken of a bone bruise would appear to be normal. A bone bruise is a common injury in the knee and the heel bone (*calcaneus*). The problems are similar to those produced by stress fractures, which are bone injuries caused by overuse. A bone bruise may also be a sign of other injuries. For example, bone bruises are commonly found where an anterior cruciate ligament (ACL) in the knee has been pulled away from the bone (*ruptured*). A ligament is a tough fibrous material that connects bones together to make our joints stable. Bruises of the bone last a lot longer than bruises of the muscle or tissues beneath the skin. Bone bruises can last from days to months and are often more severe and painful than other bruises.

SYMPTOMS

- The pain lasts longer than a normal bruise.
- The bruised area is difficult to use.
- There may be discoloration and/or swelling of the bruised area.
- When a bone bruise is found with injury to the anterior cruciate ligament (in the knee) there is often an increased:
  - Amount of fluid in the knee
  - Time the fluid in the knee lasts.
  - Number of days until you are walking normally and regaining the motion you had before the injury.
  - Number of days with pain from the injury.

TREATMENTS

Because bone bruises are sudden injuries you cannot often prevent them, other than by being extremely careful. Some things you can do to improve the condition are:

- Apply ice to the sore area for 15 to 20 minutes 4 times per day while awake for the first 2 days. Put the ice in a plastic bag, and place a towel between the bag of ice and your skin.
- Keep your bruised area raised (*elevated*) when possible to lessen swelling.
- For Activity:
  - Use crutches when necessary; do not put weight on the injured leg until you are no longer tender.
  - You may walk on your affected part as the pain allows, or as instructed.
  - Start weight bearing gradually on the bruised part.
  - Continue to use crutches or a cane until you can stand without causing pain, or as instructed.
- If a plaster splint was applied, wear the splint until you are seen for a follow-up examination. Rest it on nothing harder than a pillow the first 24 hours. Do not put weight on it. Do not get it wet. You may take it off to take a shower or bath.
- If an air splint was applied, more air may be blown into or out of the splint as needed for comfort. You may take it off at night and to take a shower or bath.
- Wiggle your toes in the splint several times per day if you are able.
- You may have been given an elastic bandage to use with the plaster splint or alone. The splint is too tight if you have numbness, tingling or if your foot becomes cold and blue. Adjust the bandage to make it comfortable.
- Only take over-the-counter or prescription medicines for pain, discomfort, or fever as directed by your caregiver.

- Follow all instructions for follow-up with your caregiver. This includes any orthopedic referrals, physical therapy, and rehabilitation. Any delay in obtaining necessary care could result in a delay or failure of the bones to heal.

SEEK MEDICAL CARE IF:

- You have an increase in bruising, swelling or pain.
- You notice coldness of your toes.
- You do not get pain relief with medications.

SEEK IMMEDIATE MEDICAL CARE IF:

- Your toes are numb or blue.
- You have severe pain not controlled with medications.
- If any of the problems that caused you to seek care are becoming worse.

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