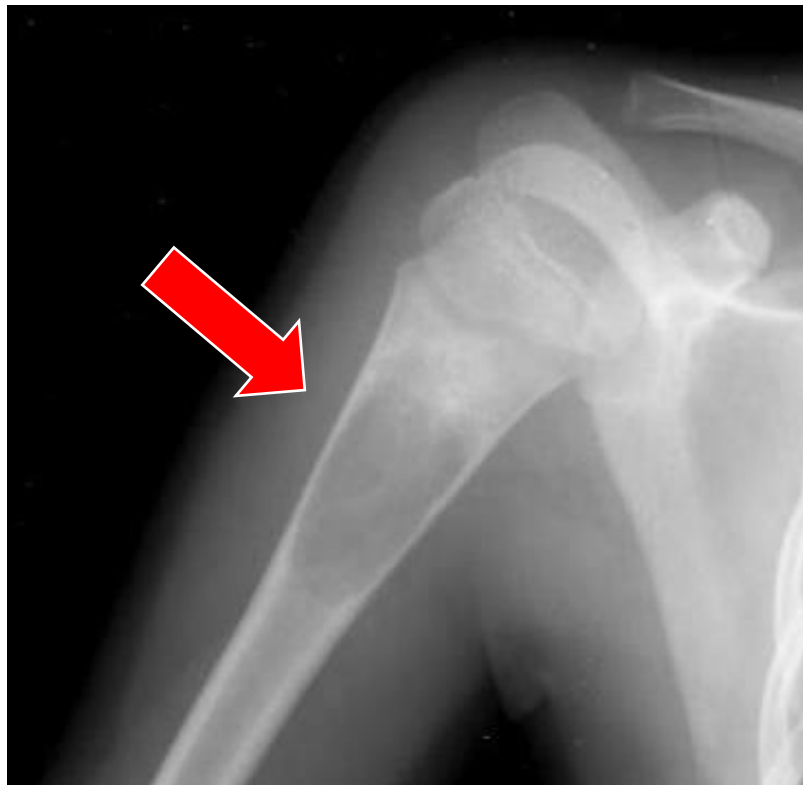


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SHOULDER, KNEE & SPORTS MEDICINE

Unicameral Bone Cyst

Unicameral (simple) bone cysts are benign bone lesions usually observed in the pediatric or adolescent population. They are located near growth plates and most commonly occur in the proximal humerus (arm bone) or proximal femur (thigh bone). A unicameral bone cyst is described as a fluid-filled cyst centrally located in the bone with cortical thinning. These cysts are usually asymptomatic until fracture occurs. Following fracture healing, the cysts do not typically resolve on their own until possibly later with skeletal maturity. Treatment is necessary for larger cysts and in weight bearing bones to decrease risk of fracture, permanent deformity, or decreased function. Depending on the size and location of the cyst, treatment options range from injecting demineralized bone matrix (sterilized donor bone) to bone grafting with internal fixation with hardware. This condition does have a high recurrence rate but typically resolves when the patient has reached skeletal maturity.



X-ray of unicameral bone cyst of the proximal humerus



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Frequent Signs and Symptoms

Unicameral bone cysts are generally asymptomatic until they become large enough to compromise the bone strength and result in an associated fracture.

Etiology (Causes)

The exact cause of unicameral bone cysts is unknown. The most common theory is that these cysts are an extension of the growth plate or an abnormal growth of synovial tissue from the joint.

Risk Factors

- Unknown
- Contact sports or other sports that require repetitive overhead activity, such as baseball, volleyball, and tennis may be a risk for associated fracture

Prevention

Once diagnosed with a unicameral bone cyst, it is important to monitor cyst growth through consistent X-rays to monitor the risk of fracture

Outcomes

The outlook following treatment of unicameral bone cysts is very good. Most of these cysts are treated successfully or will resolve on their own once the patient has reached skeletal maturity.

Potential Complications

- Recurrent fractures
- Recurrent cyst formation
- Inability to compete at previous level
- Permanent weakness of the affected limb
- Persistent pain in the affected limb



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Treatment Considerations

Depending on the size, location, and risk of fracture, treatment options may vary. If the cyst is stable, conservative treatment is recommended and the patient is monitored regularly with follow up X-rays. If the cyst becomes symptomatic or if fracture has already occurred, more significant treatment is warranted. For large cysts, a limited incision is made to expose the location of the cyst. Dr Chudik will then drain and recover the cyst. The space is then filled with bone graft. In some cases, a plate or screws are also used to stabilize the healing bone to minimize the risk for fracture.

Possible Medications

- Non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (DO NOT take within seven days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Pain relievers may be prescribed by your physician, usually only after surgery. Use only as directed.

Modalities (Heat and Cold)

- Cold is used to relieve pain and reduce inflammation. Cold should be applied for 15 to 20 minutes every two to three hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage with a cloth between the ice and your skin to prevent burning /freezing your skin.
- Heat may be used before performing stretching and strengthening activities prescribed by your physician, physical therapist, or athletic trainer. Use a heat pack or a warm soak.

Notify My Office If Symptoms Worsen



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