

Cubitus Varus

INTRODUCTION

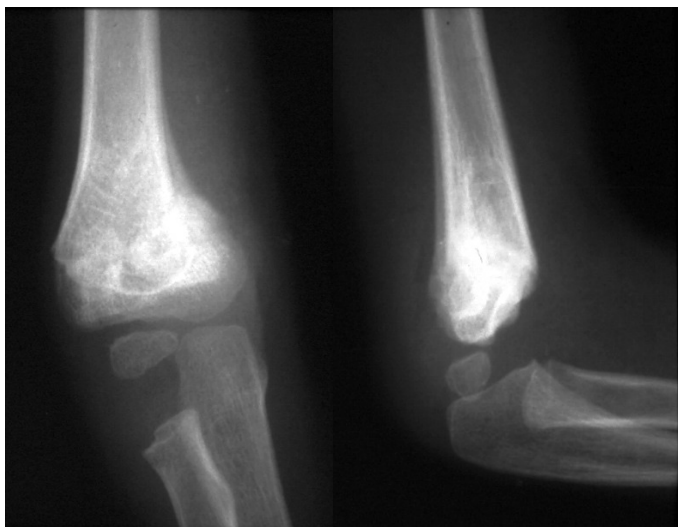
Your child has been diagnosed with cubitus varus. This is the term that describes the angulation of the arm at the elbow. This deformity develops after poor healing of a distal humerus elbow fracture. While the arm looks strange, usually the arm works well with little or no limitations. Surgery can be done to correct the deformity but has risks.

BACKGROUND

Cubitus varus is the most common complication of a supracondylar humerus elbow fracture. The incidence of this deformity is not known. Some experts have suggested that the cause is due to growth disturbance, but it is probably more related to the final healing position of the fracture. Shoulder and forearm motion can usually compensate for the changes at the elbow. Unlike many fractures in children, this fracture has limited potential to improve with growth.



Cosmetic deformity is by far the most common problem with cubitus varus. Occasionally, there can be mild loss of flexion, which is associated with the increased extension. If significant, this flexion deficit can interfere with activities of daily living. Fortunately, functional problems are uncommon with this deformity. Other uncommon problems include tardy ulnar nerve palsy, elbow instability, and recurrent elbow fractures.



DIAGNOSIS

Diagnosis is made by physical exam. Your doctor will look at the alignment and motion in comparison to the opposite arm. The degree of deformity is assessed by measuring the carrying angle of the arm, which is the angle created by the medial border of the supinated forearm and the medial border of the arm with the elbow extended. The carrying angle varies from person to person, so the opposite arm is the best baseline for comparison. Xrays

will be taken, but they do not always clarify the deformity magnitude because of the growth centers in a child's elbow.

TREATMENT

As cubitus varus is primarily a cosmetic deformity and an elbow with mild deformity does not need treatment. However, with severe deformity, cosmetic concerns or limited flexion may warrant surgical reconstruction. Reported complication rates are up to 30% and it is important to understand the risks when choosing surgery for "unacceptable cosmesis".

Most patients have a complex three dimensional deformity with rotation, hyperextension, and medial angulation. In surgery, the bone is cut, usually with removal of a wedge of bone from the lateral side that is also wider in front. The bone pieces are then stabilized with pins and a cast until healing occurs. Healing time is usually about 8 weeks. It is important to note that there may be a mild prominence at the lateral condyle, which may leave a mild appearance of persistent cubitus varus.



EXPECTED OUTCOMES AND PROGNOSIS

Without surgery, risks are minimal, but the deformity will persist and little improvement is expected with growth. With surgery, there are risks of infection, scarring, stiffness, loss of fixation, and persistent deformity. A well planned surgery minimizes these risks. Mild residual deformity and a surgical scar are common after surgery, but usually the appearance and function are quite good.

MORE INFORMATION

Further information can be obtained on the internet. Your local public library can help you explore these sources if you are interested. Two good sites for expert and peer reviewed information are the American Academy of Orthopedic Surgeons at www.aaos.org and the Pediatric Orthopedic Society of North America at www.orthokids.org.