BLOUNT'S DISEASE

Blount's Disease (Tibia Vara) is a condition in which there is abnormal growth of the inside (medial) portion of the growth plate at the upper portion of the shin bone (tibia). This causes the upper end of the tibia to grow at an angle. The tibia may also have an inward twist that causes the patient to walk with the foot turned inward. If this condition is not treated, a bowleg deformity will occur, worsening over time and possibly resulting in damage to the knee joint.

Blount's disease can occur in the young child or adolescent. The onset is usually 4-10 years of age for juvenile and 10-14 years of age for adolescent. It is a *slowly* progressive bowleg deformity with pain rather than deformity as the initial complaint.

Both types of Blount's have common characteristics. The differences are mainly due to the age of onset and the amount of remaining growth. Therefore, the juvenile group has the possibility of greater deformity and the adolescent less. The juvenile and adolescent forms most often affect only one leg. Osteotomy with correction of angulation usually results in a return to normal growth. However, recurrence of the deformity can occur, especially for those with juvenile Blount's.

Surgical Treatment

In moderate to severe cases a corrective osteotomy of the tibia (cutting of the shin bone) is performed to set the leg straight and to prevent further damage to the joint surface. This will allow the medial growth plate to heal and normal growth should then resume. If both legs are involved, you and your orthopaedic surgeon will decide if it is best to do one or both legs at the same time. Many times it is done in a staged manner to allow the child to be as independent and mobile as possible.

Your child will stay in the hospital for 2 – 3 nights following the surgery. He may be placed in a long leg cast or an external fixator may be used (a device with pins that attaches to the leg). Initially he will not bear weight on the affected leg(s) for about 4-6 weeks, or until early evidence of healing is seen on X-ray. Physical Therapy will show your child how to move about with crutches, a walker, or a wheelchair. The nurses will teach you and your child how to do a daily pin site care.

With milder cases, minor surgery may be considered that may slow down the rate of bowing and produce some amount of straightening of the leg. Changing the way a growth plate grows is called a hemi-epiphyseodesis. In the surgery, an incision is made on the outside part of the shinbone and 2-4 bone staples are driven into the bone around the growth plate which acts as clamps. If the inside growth plate can resume some normal growth and the outside growth plate is slowed by the bone staples, the condition may stay the same or improve. Postoperatively, the adolescent is on crutches for 3-6 weeks and limited from physical education for 4-6 weeks.

Post-Operative Care

You will be seen in the office in approximately 7-10 days to check the wound and then every 2-3 weeks with an X-ray to evaluate healing. Occasionally a second procedure, such as a cast change or adjustment to the external fixator, will be done in the operating room to further adjust the alignment of the leg during the healing process. Healing is usually complete in 8-12 weeks and the cast or external fixator is removed. A splint may be used for an additional 2-4 weeks until the pin sites have completely healed and the child is able to walk without assistance.

In milder cases, surgery may be considered to slow down the growth on the outside (lateral) portion of the growth plate to prevent worsening of the deformity and allow gradual correction. Postoperatively the patient is on crutches for a month and uses a knee immobilizer until knee ROM is normal.

It is important that your child continue to be followed yearly by the orthopaedic surgeon until he reaches maturity. Recurrence of the deformity is possible, especially during periods of rapid growth. Early recognition of a recurring angulation will allow for appropriate treatment before damage to the joint surfaces occurs.

OK™ Orthopaedics for Kids