

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 juvenile onset is usually from four to ten years of age and ten to fourteen years of age for adolescent onset. 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 (cutting of the shin bone) 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 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 orthopedic 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 two to three 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 four to six weeks, or until early evidence of healing is seen on X-ray. A physical therapist 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 clean the pin sites daily.

In milder case of tibia vara, where the angle is measured to be less than fifteen degrees, surgery may be considered to slow down the growth on the outside (lateral) portion of the growth plate and to prevent worsening of the deformity as the child continues to grow. Changing the way a growth plate grows is called a hemiepiphyseodesis. In the surgery, bone staples are used on the outside part of the tibia at the level of the growth plate. If the inside growth plate can resume normal growth while 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 12 weeks.

Post-Operative Care

You will be seen in the office in approximately seven to ten days to check the wound and then every two to three 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 eight to twelve weeks and the cast or external fixator is removed. A splint may be used for an additional two to four weeks until the pin sites have completely healed and the child is able to walk without assistance.

It is important that your child continue to be followed yearly 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.



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