Metatarsus Adductus

INTRODUCTION

Your child has been diagnosed with metatarsus adductus. This is one of the common causes for intoeing, typically seen in infants. This diagnosis describes the curvature in the foot. There is a similar curvature in club foot deformity, but clubfeet have significant hindfoot deformity as well, which is not present with metatarsus adductus. Metatarsus adductus is usually recognized at birth. For mild cases, metatarsus adductus improves with stretching and growth. Severe cases sometimes benefit from a series of plaster cast applied weekly to stretch and mold the feet. Even with treatment, there is may be a mild residual curvature in the foot, which does not cause problems in the long run and does not need to be treated.

BACKGROUND

Metatarsus adductus is one of the three common causes of intoeing. Metatarsus adductus is typically recognized in infancy, while other types of intoeing are not recognized until the child is older. The foot curvature is related to foot development prior to being born. Prior to birth, the legs were held in a confined position. Pressure from the uterine wall can cause the midfoot to develop with a curvature. Infants have 3 levels where a curvature or a rotation can be found which create an appearance of intoing. A curvature in the foot is called metatarsus adductus. A twist in the lower leg is called tibial torsion and a twist in the thigh bone is called femoral anteversion.

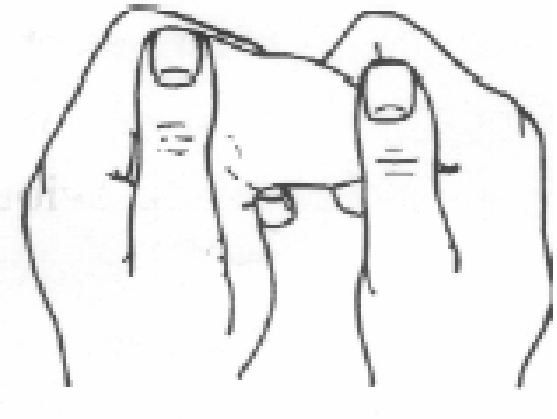
DIAGNOSIS

Metatarsus adductus is usually seen at birth or recognized shortly afterwards. The doctor will examine your child's foot and evaluate the position and mobility. It is important to consider the relaxed shape of the foot separate from the shape when the muscles of the toes pull the foot into a curved position. It is common for kids to have more flexibility and enough pull from their toes muscles to make the foot look curved. This dynamic curvature is not metatarsus adductus. As the feet grow and develop, the dynamic curvature will relax.

The severity of the structural component of the metatarsus adductus curvature can be assessed in the relaxed state, by using an imaginary line extended along the center of the heel pad. In the normal foot, this line should point roughly to the third toe. In mild metatarsus adductus, this line points to the 4th toe. In moderate metatarsus adductus, this line points to the 5th toe and in severe metatarsus adductus, this line points lateral to the 5th toe.

TREATMENT

For feet with muscle activity which makes the foot look curved, it can help to stretch the foot and loosen up tight muscles and joints. Stretching should be done by the parents and caregivers several times each day, generally at each diaper change. The stretching is done by placing the side of the index fingers on the middle of the curvature and using the thumb to push down and on the toes and heel.



For feet that do not relax with stretching with severe curvature, treatment is recommended and usually involves applying plaster casts or special corrective shoes. The most common treatment is serial casts. This is generally started at about 3-4 weeks of age. Long leg casts made of plaster of Paris are applied by the doctor to gently stretch the foot from its initial position. The casts are removed and new cast applied each week until the curvature is overcorrected. Following the casts, there is usually some rebound effect and reoccurrence of the curvature. Special shoes or a brace may be needed to maintain the correction. Serial casting and has a high rate of success in partially correcting the curvature. The goal of this type of treatment is to correct severe curvature to a mild curvature. In the long run, feet with mild to moderate curvature function very well.

PROGNOSIS

Kids run and jump and participate in sports without limitations. There are no long term limitations expected. As the child gets older, it will be important to choose the right shoes. Special shoes are not needed, but it is important to find shoes that are wide enough and don't crowd the toes.

Moderate and severe metatarsus adductus is often effective treated with stretching and occasionally casting. Some degree of mild curvature often persists, but does not cause long term problems. Metatarsus adductus usually does not interfere with the way your child walks, runs, jumps, or plays. It has not been linked to degenerative arthritis or any other medical conditions in adulthood.

MORE INFORMATION

Two good internet sites for expert and peer reviewed information are the American Academy of Orthopedic Surgeons at www.aaos.org and www.emedicine.com.

FEEDBACK

If you have questions or comments, please contact the office or submit them to the web site at www.pedortho.com.