Club Foot

BIRTH DEFECT RESEARCH FOR CHILDREN

What is Clubfoot?

Clubfoot is a term used to describe a variety of ankle and foot deformities present at birth. The bones, joints, muscles, and blood vessels of the foot are incorrectly formed. The defect may be mild or severe and affect one or both feet. The foot of an affected child has been described as ‘kidney shaped.’ The foot and calf are also often noticeably smaller. A clubfoot is usually turned in, stiff, and lacks the normal range of motion.

Clubfoot

There are several types of Clubfoot:

calcaneal valgus - the foot is angled at the heel with the toes pointing upward and outward

matatarusus varus - the front of the foot is turned inward

talipes equinovarus - the foot is turned inward and downward

Clubfoot can also be divided into two categories: an isolated type and a type associated with other congenital birth defects. Including:

Malformation Syndromes:

Cerebro-hepto-renal syndrome; Chromosome triploidy; Larsen syndrome; Femoral hypoplasia-unusual facies syndrome; Pena-Sholeir syndrome.

Chromosomal Syndromes:

Chromosome 4, monosomy 4p; Chromosome 9, partial monosomy 9p; Chromosome 13, monosomy 13q and Chromosome 18, monosomy 18q.

Other Syndromes:

Aarskog syndrome; Bloom syndrome; Dubowitz syndrome; Chrondroectodermal dysplasia; Homocystinuria; Mucopolysaccharidosis II; Mietens-Weber syndrome; Noonan syndrome; Seckel syndrome and Weaver syndrome.

How many children are born with Clubfoot?

Since numerous conditions may be involved in the definition of clubfoot, occurrence rates have varied by area and clinical rigor in diagnosis. In North America and Europe 18 children out of every 10,000 are born with a clubfoot.

What is the cause of Clubfoot?

The most common isolated form is thought to be hereditary. Other congenital deformities that include clubfoot are most likely due to a combination of environmental and genetic factors.

Helping a child with a Clubfoot

Treatment: In most cases, clubfoot can be treated so the deformity is reduced and normal function regained. Treatment is best managed by an orthopedic surgeon or another specialist experienced in treating clubfoot.

Taping and Casting: The first step in management of a clubfoot is taping and/or a corrective cast. The goal is to reposition the foot into a neutral setting. Casts and taping are regularly changed and may be used for up to a year until the position of the foot becomes normal or improvement stops. One third of children with clubfeet respond to this type of therapy. Conservative treatment is usually more successful with milder cases.

Surgery: If casting or taping fails then operative treatment is the next option. Surgery generally involves releasing and lengthening of tendons with pins that are left in place for a couple of weeks to help stabilize and correct the position of the foot. Casting is often continued after surgery.

Preventing Reoccurrence: Whether correction is done by casting or surgery, reoccurrence is possible. Children need regular follow-up for several years to monitor for reoccurrence. Isolated clubfoot may recur up to age six or seven. Most recurrences may be treated again with casting or night splinting. Some doctors say corrective shoes have little benefit while others argue some modifications, such as arch supports help to alleviate pain and discomfort. Participation in stretching exercises and sports may help to strengthen and promote the flexibility of a corrected foot.

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Complications: Complications include reoccurrence, rocker bottom feet, over correction, and stiffness. If clubfoot is not fully corrected or goes untreated, the child may develop an unusual way of walking (gait).

Prognosis: With adequate treatment, a positional clubfoot can be eliminated and normal functioning achieved. When the clubfoot is associated with other birth defects, the prognosis is dependent on factors related to those conditions.

Fact Sheet by:

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