



Sever's Disease

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ABSTRACT

Sever's Disease, otherwise known as calcaneal apophysitis is an inflammation of the growth plate in the heel of growing children, typically adolescents. The condition presents as pain in the heel and is caused by repetitive stress to the heel and is thus particularly common in active children. It usually resolves when the bone has completed growth or activity is lessened. The etiology of pain in Sever disease is believed to be repetitive trauma to the weaker structure of the apophysis, induced by the pull of the tendo calcaneus (Achilles tendon) on its insertion. Sever disease is a self-limited condition; accordingly, no known complication exists from failure to make the correct diagnosis.

Key Words: Sever's disease, apophysitis, Achilles tendon.

INTRODUCTION

Sever's disease, also called calcaneal apophysitis, is a painful bone disorder that results from inflammation (swelling) of the growth plate in the heel. A growth plate, also called an epiphyseal plate, is an area at the end of a developing bone where cartilage cells change over time into bone cells. As this occurs, the growth plates expand and unite, which is how bones grow. Sever's disease is a common cause of heel pain in growing kids, especially those who are physically active. It is named for James Warren Sever (1878–1964), an American Orthopedic doctor, who characterized it in 1912.^[1] Dr Sever had "The Principles of Orthopaedic Surgery" published in 1940 by The Macmillan Company.

INCIDENCE

It usually occurs during the growth spurt of adolescence, the approximately 2-year period in

early puberty when kids grow most rapidly. This growth spurt can begin any time between the ages of 8 and 13 for girls and 10 and 15 for boys. Sever's disease rarely occurs in older teens because the back of the heel usually finishes growing by the age of 15, when the growth plate hardens and the growing bones fuse together into mature bone.

CAUSES

Sever's disease is directly related to overuse of the bone and tendons in the heel. This can come from playing sports or anything that involves a lot of heel movement. It can be associated with starting a new sport, or the start of a new season. Children who are going through adolescence are also at risk of getting it because the heel bone grows quicker than the leg.^{[4][5]} Too much weight bearing on the heel can also cause it, as can excessive traction since the bones and tendons are still developing. It

occurs more commonly in children who over-pronate, and involves both heels in more than half of patients.

SIGNS AND SYMPTOMS

The most obvious sign of Sever's disease is pain or tenderness in one or both heels, usually at the back. The pain also might extend to the sides and bottom of the heel, ending near the arch of the foot.

A child also may have these related problems:

swelling and redness in the heel

difficulty walking

discomfort or stiffness in the feet upon awaking

discomfort when the heel is squeezed on both sides

an unusual walk, such as walking with a limp or on tiptoes to avoid putting pressure on the heel

Symptoms are usually worse during or after activity and get better with rest.

DIAGNOSIS

The main diagnostic tool is pain on medial- lateral compression of the calcaneus in the area of growth plate, so called squeeze test. Foot radiographs are usually normal. Therefore, the diagnosis of Sever's disease is primarily clinical.

TREATMENT

Treatment may consist of one or more of the following:

- Elevating the heel
- Stretching hamstring and calf muscles 2–3 times daily
- Using R.I.C.E. (Rest, Ice, Compression, Elevation) [2]
- Foot orthotics
- Medication
- Physical therapy
- Icing daily (morning)
- Heating therapy

Open back shoe are best and avoid high heel shoes

RECOVERY

Sever's disease is self-recovering, meaning that it will go away on its own when the foot is used less or when the bone is through growing. The condition is not expected to create any long-term disability, and expected to subside in 2–8 weeks.^[3] Some orthopedic surgeons will put the affected foot in a cast to immobilize it.

While symptoms can resolve quickly, they can recur. Sever's disease is more common in boys than girls; the average age of symptom onset is nine to eleven years.

PREVENTION

- Maintain good flexibility through stretching exercises
- Avoid excessive running on hard surfaces
- Use quality, well-fitting shoes with firm support and a shock-absorbent

REFERENCES

1. "Sever disease - definition of Sever disease in the Medical dictionary - by the Free Online Medical Dictionary, Thesaurus and Encyclopedia". Medical-dictionary. The free dictionary.com. Retrieved 2014-04-29.
2. Mark A Noffsinger (2016-09-07). "Calcaneal Apophysitis (Sever Disease) Workup". Medscape. Retrieved 2017-01-19.
3. Kose, Ozkan (2010). "Do we really need radiographic assessment for the diagnosis of non-specific heel pain (calcaneal apophysitis) in children?". *Skeletal Radiology*. 39 (4): 359–361. doi:10.1007/s00256-009-0774-y.