

Severs Disease

Introduction

This condition was first described by Sever in 1912. It is the most common cause of heel pain in children aged 9-13 years. Patients suffering from Severs disease nearly always complain of heel pain from sporting activity. It does however settle quickly with rest.

Etiology

Severs disease is inflammation of the calcaneal apophysis. It is classified as an osteochondroses due to repetitive trauma directly to the apophysis, induced by traction of the achilles tendon.

Physiologically there is some speculation as to the type of injury sustained. One theory is that microfractures are believed to occur. The fibrocartilage of the calcaneal apophysis becomes inflamed nonetheless. Both impact as well as traction are likely to contribute. Children who are heavier are also at greater risk for developing calcaneal apophysitis.

Pain occurs during activity and often deteriorates rapidly when resuming sport after a short rest period (i.e. after a ½ time break). At the beginning of winter, the grounds are hard, but soften later on. X-rays are however of little use in diagnosing the condition, rather they offer reassurance in recalcitrant cases that it is nothing more serious. Some research has however highlighted that Severs reveals increased fragmentation of the calcaneal apophysis compared to the normal population. Whilst strong to compression understand that bone is very weak to traction forces (i.e. avulsion fractures).

Examination

Clinically the presentation may vary. The child may be tip toeing or limping or even walking normally. The apophysis is usually very tender to lateral, medial, and posterior palpation. Pain can often be reproduced with hopping.

Treatment

The severity of the condition dictates an appropriate treatment regime.

R.I.C.E, appropriate athletic footwear, heel cushioning, heel raises, orthoses, and calf stretching can all offer some symptom relief. The most effective treatment however is rest.

Parental pressure often necessitates bargaining the type of rest (if any) that is employed. Rest can take

the form of reducing only certain sports, trainings, or drills, until more complete relief of symptoms is obtained.

Podiatry treatment has much to offer Severs sufferers. Good relief can usually be obtained with “soft orthotics” and heel raises. Taping can also be particularly beneficial for specific sporting events.

Patients will always grow out of this disorder. This is when the apophysis begins to fuse at around 14-15 years of age.

Plaster immobilisation is sometimes used. This however is more to restrict the child from activity.

If X-rays are normal and the condition not settle with “complete rest” then consider infectious and arthritic conditions.



The growth areas of the calcaneus can easily be seen on this X-ray. Note the slight fragmentation. Ossification is highly variable in the normal adolescent calcaneus.

Take home messages

- Pain on sporting activity - settles quickly with rest
- Males > females aged 9-13 years
- Palpable medial/lateral and posterior calcaneal pain
- Often present during skeletal growth spurt
- Patients usually participate in many contributing sports
- Activity reduction should quickly reduce symptoms
- Review footwear - ensure good cushioning and support
- Orthotic therapy and heel raises offer good results