Severs Disease

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Severs disease, also known as traction apophysitis, is an inflammation of the growth plate of the heel bone. It is a very common injury in growing adolescents and is seen more commonly in boys.

The muscle group at the back of the lower leg, commonly known as the calf, is composed of the gastrocnemius and soleus muscles. These attach via the Achilles tendon into the heel bone. In people who have not yet reached skeletal maturity, a growth plate exists in the heel bone where the Achilles tendon attaches to the heel bone. This growth plate is primarily composed of cartilage.



What causes Severs disease?

As the bones in the leg lengthen during a rapid growth phase, the muscles in the leg do not adapt their length as fast. This results in an increase in tightness in the calf muscles and achilles tendon which places increased load on the immature bone of the growth plate.

Typical symptoms include pain in the posterior heel during and after activity, especially if the activity involves running and jumping. Morning stiffness and pain is a common complaint. If the pain is severe, it can be a problem at night.

Severs disease is essentially an overload injury. Excessive spring-loaded activity, such as running will increase load on the growth plate. Factors that contribute to the problem are poor footwear (such as worn school shoes), poor foot biomechanics, a rapid growth spurt, ankle injuries that are poorly rehabilitated, weak gluteal muscles and poor pelvic control.
Severs disease is a self-limiting condition and usually resolves once the bone had completed growing. However, it can give considerable discomfort to the growing child and it is important that the condition is well managed and not written off as ‘growing pains’.

Physiotherapy management of severs disease involves reducing the load on the growth plate. It is important to moderate the amount of running and jumping activities in a week. Initially, it may be necessary to completely rest from these activities to settle a severe flare up of heel pain. A heel raise and regular icing can help to further reduce the load on the area. It is important to identify and correct the predisposing factors for this injury. An individualised program to stretch the musculature of the lower leg without stressing the growth plate and strengthen the areas that help to offload the area will help to prevent re-occurrence of the injury. Management of load in the area is crucial to successful resolution of the problem. It can take 2-3 months to effectively manage the problem and it is not uncommon for the injury to return with subsequent grow spurts.

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