Abstract

Title:

Complete Achilles tendon rupture

Thesis aim:

The purpose of this bachelor thesis is to express the overall view of complete Achilles tendon rupture. The thesis consist of two parts:- firstly, the theoretical part which is concern about the anatomical structure of ankle joint, biomechanice and kinesiology followed by detailed description of the nature of injury (etiology,epidemiology,pathogense,and dignosis); next is the suggested treatment option. After that, physicaltherapy approch in case of Achilles tendon rupture. Secondly, the special part "case study" focus on the evaluation and the assessment of patient after Achilles tendon rupture during REH a period of two weeks .Finally, determine the measurment outcome of the suggested treatment.

Clinical findings:

The most imporant clinical finding was pain during ambulation where patient is not able to preform complete toe off during gait. Secondary, limited ROM in right ankle joint during DF,PF,IN and EV. Finally reduced muscle power specially on gastrocnemius , soleus (tricep surae) and tibialis anterior on the injured foot which leads to overall decrease in quality of muscle of L.E on right side and ankle joint function.

Methods:

The rehabilitation aim was primarily focused on reducing the pain and swelling on right ankle joint, increase ROM in ankle joint, and relaxing hypertonic muscles by using PIR and soft tissue techniques. Improve muscle strength of gastrocnemius and soleus muscles as well as all the L.E muscles in general, by applying isometric strengthening exercise, close chain exercise with resistance and PNF in 2nd diagonal extension. Lastly, regain normal gait while using crutches and apply sensomotoric exercises which will not only improve ankle joint function but also the stability and balance during walking

Result:

Major improvements were in gait, patient ambulation improved from "swinging to gait" to walk for short distance without the help of crutches while preforming partial toe off. Next, increase ROM of ankle joint approximately 5° in DF, PF, IN and EV. Release of restricted joint play on both feet. Muscle strength test improved by 1- degree on the right foot muscles on planter flexor,

tibialis anterior tibialis posterior and by 2-degree increase on flexor and extensor of small foot intrinsic muscle

Conclusion:

Patient progressed positively from therapy, every day. He is satisfied and can feel the improvement himself, he is more confidant while walking and more importantly stable. The fact, that he is a sport men makes it easier to achieve the optimal result by continuing the same exercises and introducing more challenging exercise régime which helped to restore ankle joint stability and function; now the patient is able to ambulate independently without the help of crutches.

Keywords:

Sport injury, ankle joint, Ankle joint rupture, rehabilitation of Achilles tendon rupture