

Radial Shockwave Therapy (RSWT) for the treatment of muscle injuries in athletes

Introduction

Extracorporeal shockwave therapy (ESWT) has been applied for insertion tendopathies since 10 years. Since 2000 a new ballistic principle of ESWT, the so called Radial Shockwave Therapy (RSWT) has been introduced. The aim of the study is to evaluate the efficacy of ballistic ESWT in the treatment of muscle injuries.

Material And Methods

During the period September 2003-May 2004, 24 athletes suffering from muscle injuries were presented to our Sports Injury Clinic. Their muscle injuries were ruptures due to overload (indirect trauma). All of them were classified as II degree muscle ruptures. From the 24 athletes, 12 presented with Hamstring injuries, 8 presented with adductors muscles injuries and 4 with gastro injuries. From the 24 athletes with muscle injuries, 14 were subacute (7 days to 7 weeks), and the rest 10 were chronic (more than 7 weeks).

Their major complain was pain during high intensity training and disability to maximize the intensity of their training more than 80% percent evaluation was performed using:

1. Range of motion measurement of the injured side, compared to the healthy side
2. The ability to resisted movements (knee flexion and Hip extension etc)
3. Visual Analogue Scale (VAS)
4. Their ability to full participation in their sport and
5. With ultrasound scan.

The Radial Shock Wave Therapy (RSWT) was applied as a treatment, and all the injuries that were subacute, were treated with three sessions with an energy flux density corresponding from 2,5 - 3 bars working pressure, working frequency 6Hz and 2000 impulses each, one session per week, using the Swiss DolorClast? (EMS Kostanz,Germany). While the injuries that were in a chronic stage, were treated with 4 sessions.

Follow up was done at 1, 3, 4 and 6 weeks

Results

All the athletes returned to their pre-injury participation in training activities, with equal range of motion in both sides, and without pain on resisted movements. They also did not refer pain during their full training activities.

Muscle injuries, acute, subacute and chronic, are a difficult clinical problem and the most common complication is the scar tissue formation. Many different treatments have been proposed such as injections, physiotherapy, massage. Our encouraging preliminary results of this prospective pilot study on Radial Shock wave therapy for subacute and chronic muscle injuries, seems to be a safe , non invasive and effective therapy, compared to other therapies. Further follow up of these patients is needed, and further research using controlled and randomized studies.

References

- [Malliaropoulos N. et all](#), The role of stretching in Rehabilitation of Hamstring injuries. *Medicine and Science in Sports and Exercise*, May 2004.
- [Malliaropoulos N. et all](#), Hamstring injuries; a new classification. *World congress of sports medicine* 2002.
- [Malliaropoulos N. et all](#), Hamstring injuries A new predisposing factor. *World congress of sports medicine* 1994.
- [Malliaropoulos N. et all](#), Isokinetic rehabilitation for Hamstring injuries. *World congress of sports medicine* 1994.

- **Surgery**
- **Biography**
- **Injuries**
- **Articles - Lectures**
- **Announcements**
- **Links**

Recent Announcements

Tuesday, 14 Feb 2017

5th Congress of ECOSEP & 2nd UAE FA Football Medicine Update 25th-27th November 2017 Dubai

[read more](#)

Monday, 05 Sep 2016

5th ANNUAL PODIATRIC SPORTS MEDICINE CONFERENCE In association with EUROPEAN COLLEGE OF SPORTS & EXERCISE PHYSICIANS INSPIRING CLINICAL EXCELLENCE – THINKING BEYOND BIOMECHANICS

[read more](#)

Recent Articles

Platelet Rich Plasma (PRP)

An innovative treatment, for Musculoskeletal Pathologies , PRP uses your own blood for healing muscle, tendon and ligament injuries.

A common form of healing is scarring which affects function . Most of the Current therapies treating sports Injuries do not change the intrinsically poor healing properties. Given this situation, biologically based strategies involving the stimulation of cell activities through the delivery of Growth Factors have attracted considerable interest.

Platelet Rich Plasma is derived by placing a small amount of your blood in a filtration system which separates red blood cells from platelets. The high concentration of platelets (containing a high level of Growth Factor) is then injected into the injured tissue which initiates the body's natural healing response.

[read more](#)

Extra Shockwave Therapy & Treatment

At European SportsCare, Extracorporeal Shockwave Therapy (ESWT) is available for the treatment of musculoskeletal softtissue pathology such as Tendon, Ligament, Muscle and bone. Shockwave Therapy is a non-invasive treatment provided by fully trained Consultants providing this treatment for more than 15 years. It is available as an out-patient treatment in one of our comfortable consultation rooms at 68 Harley Street.

[read more](#)

Acute Lateral Ankle Sprains In Track & Field Athletes: A Proposal Of An Expanded Classification

We present a longitudinal observational study on classification of acute lateral ankle ligament injuries in track & field athletes, based on objective criteria. These very common and sometimes troublesome sports injuries are treated functionally but there is a lack in international literature in predicting the time needed for full recovery.

[read more](#)

Ten year follow-up study comparing conservative versus operative treatment of anterior cruciate ligament ruptures. A matched-pair analysis of high level athletes

Objective: To compare long term outcome of highly active patients with anterior cruciate ligament ruptures treated operatively versus non-operatively.

Design: We reviewed high level athletes with an anterior cruciate ligament rupture on either MRI or arthroscopic evaluation more than 10 years previously, who were treated conservatively. They were pair-matched with patients who had had an anterior cruciate ligament reconstruction with bone-patella-tendon-bone, with respect to age, gender and Tegner activity score before injury. Participants: In total 50 patients were pair-matched.

Results: We found no statistical difference between the patients treated conservatively or operatively with respect to osteoarthritis or meniscal lesions of the knee, as well as activity level, objective and subjective functional outcome. The patients who were treated operatively had a significantly better stability of the knee at examination.

Conclusion: We conclude that the instability repair using

a bone-patella-tendon-bone anterior cruciate ligament reconstruction is a good knee stabilising operation. Both treatment options however show similar patient outcome at 10 year follow up.

[read more](#)

ACL injuries. Diagnosis, treatment and rehabilitation

The ability to recognize the ACL deficient knee is lacking, even among orthopaedic surgeons. The history of an acute ACL tear is remarkably constant, because the injury is often non contact, and patients usually

report a twist on the flexed knee, turning to the same side as the injured knee, although hyperextension or direct injury is the cause in some sports. Patients often remember a loud pop, but, because there are no nociceptors in the ACL, pain is not an immediate feature in the isolated lesion. Players may attempt to continue to play, but they usually stop because the knee feels insecure. Pain ensues in association with a hemarthrosis: 70% of acute hemarthroses of the knee are associated with a tear of the ACL. The diagnosis must be confirmed before treatment is offered.

[read more](#)

- [Home](#)
- [Biography](#)
- [Injuries](#)
- [Announcements](#)
- [Contact](#)
- [Links](#)

