GUIDANCE AND REFERENCE

CONTENTS

CellSonic

1. CONTACT DETAILS

For any information, contact me on 07794822295, any time. If I cannot answer your call, leave a message, I will come straight back to you. If something is important to you and requires an answer then it is important to me.

My email address is mark@cellsonic-medical.com

The business uses:

Twitter @cellsonicESWT

Facebook https://www.facebook.com/CellsonicESWT

A website specific for the UK is under construction though www.cellsonic-medical.com exists for reference

I am on hand to answer any questions you may have about the machine, protocols, results and to share experiences with you, that other customers globally are having, to ensure you gain maximum benefit from the use of the Cellsonic machine.

Mark Wilson
Managing Director
Cellsonic Ltd

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2. PROTOCOLS

Typical Indications:

Heel Spur
Plantar Fasciitis
Calcified Shoulder
Tendonosis Calcera
Impingement Syndrome
Jumpers Knee
Pseudoarthrosis
Tendon issues in ankle, knee, shoulder, hip

PREPARATION AND TREATMENT

1. identify the area to be treated
2. shockwaves only travel through water so ensure gel is liberally applied
3. SHAKE THE TREATMENT HEAD BEFORE USE
4. Set the energy level to the desired level. For soft tissue injury, this can be energy level 5
5. Set the number of shocks for the treatment. Use 1000 to 1200 shocks and if you feel the patient requires the benefit of the “Soft Start” facility, then select this option on the keypad
6. Hold the treatment pad over the area to be treated and place the foot on the foot pedal to begin treatment
7. To pause the treatment at any point, remove your foot from the foot pedal
8. The treatment head can be moved around the treatment area, to change the angle of the wave. This also prevents the echo effect of returning waves
9. If repeat treatment is required then assess after 2 weeks. Reduce the number of shocks to 75% of initial treatment and reduce energy level to Level 3/4

A key learning point is that this treatment compliments ultrasound, friction and other methodologies a physiotherapist would look to apply. We are constantly monitoring success stories from other physiotherapists and current tests are indicating that shocks per treatment can be reduced without negative effect but we will advise results on a specific basis.

EXAMPLE HEEL SPUR TREATMENT

Heel Spur usually occurs as the result of excessive stress and strain on the heel. The doctor will locate the region of interest - the target for the shockwave treatment.. Use a spark head of the CellSonic machine with a focal length of 20 mm and shoot 1,000 to 1,200 shocks. This takes six minutes. An improvement can be felt after a week and within 4 to 6 weeks all could be cured. If not, a second treatment should fully revitalise the degenerative tissue areas. Space the treatments about a month to 6 weeks apart. Only on very rare occasions has a third treatment been needed.

CASE STUDY – A MORE COMPLEX ISSUE - ACHILLES TENDON IRRITATION / INFLAMMATION

Achillodynia frequently occurs as the results of excessive stress and strain on the achilles tendon.It is especially common among athletes. In patients with this condition, painful and changed areas of tissue are found along the Achilles tendon. These areas can be reliably located and visualised with ultrasound by a skilled specialist. Apart from shockwave treatments for tennis elbow, heel spur and calcified shoulder, the shockwave treatment protocols for Achillodynia are more complex.

Depending on the regions of interest in the tendon to be treated, often divided over multiple areas along the tendon, the administered number of shockwaves can be from 500 to 2,000 shocks. The energy setting for each tendon area can vary from low to above midrange. Two treatments and, in certain cases, up to four treatments for Achillodynia are not unusual due to the potential scale of the injured area.

In general, maximum number of shockwaves will be administered for the very first treatment in the tendon (often in more than one area).For the second and possibly third and fourth treatment the number of shockwaves needed (per tendon area) will decrease as well as the energy settings for each repeated treatment. The patient generally experiences a distinct reduction of symptoms several days after the treatment. One of the first reliefs for these patients is the experience of less problems with the so called "morning stiffness". After shockwave therapy on Achillodynia it can take a number of weeks before a "complaint free" status is reached.

3. LIST OF REFERENCE PAPERS

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Preliminary Results on the Safety and Efficacy of the OssaTron for Treatment of Plantar Fasciitis[Foot & Ankle Intl]

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Electrohydraulic High-Energy Shock-Wave Treatment for Chronic Plantar Fasciitis [The Journal of Bone & Joint Surgery]

Extracorporeal Shockwave for Chronic Patellar Tendinopathy [American Ortho Society for Sports Med]

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Extracorporeal Shockwave-Induced Expression of Lubricin in Tendons and Septa [Cell & Tissue Research]

Extracorporeal Shock Wave Therapy Enhances Early Tendon-Bone Healing and Reduces Bone Tunnel Enlargement in Hamstring Autograft Anterior Cruciate Ligament Reconstruction [The American Journal of Sports Med]

Extracorporeal Shockwave Therapy in Musculoskeletal Disorders [Journal of Ortho Surgery & Research]

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Antibacterial Effects

Low-energy Shock Waves Enhance the Susceptibility of Staphylococcal Biofilms to Antimicrobial Agents in Vitro [The Journal of Bone & Joint Surgery]

Bone Treatments and Non-Unions

Treatment of Nonunions of Long Bone Fractures with Shock Waves [Clinical Ortho & Related Research]

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Long-term Follow-up of Shockwave Treatment on Heterotopic Ossifications and New Radiologic Methodologies for Evaluation

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Treatment for Osteonecrosis of the Femoral Head: Comparison of Extracorporeal Shock Waves with Core Decompression and Bone-Grafting [The Journal of Bone & Joint Surgery]

The Effects of Extracorporeal Shockwave on Acute High-energy Long Bone Fractures of the Lower Extremity [Archives of Ortho and Trauma Surgery]

Application of Extracorporeal Shock Wave Treatment to Enhance Spinal Fusion: A Rabbit Experiment[Surgical Neurology]

Extracorporeal Shock Wave Therapy for Resistant Stress Fracture in Athletes [The American Journal of Sports Med]

Biomechanical Testing of Spinal Fusion Segments Enhanced by Extracorporeal Shock Wave Treatment in Rabbits [Chang Gung Medical Journal]

Extracorporeal Shockwave Therapy Shows Regeneration in Hip Necrosis [British Society for Rheumatology]

Extracorporeal Shock Wave Therapy for Nonunion of the Tibia [Journal of Orthopaedic Trauma]

Extracorporeal Shock Wave Treatment of Non- or Delayed Union of Proximal Metatarsal Fractures[Foot & Ankle International]

Extracorporeal Shockwave Therapy in Musculoskeletal Disorders

VEGF Modulates Angiogenesis and Osteogenesis in Shockwave-Promoted Fracture Healing in Rabbits [Journal of Surgical Research]

Cardiovascular

Extracorporeal Cardiac Shock Wave Therapy: First Experience in the Everyday Practice for Treatment of Chronic Refractory Angina Pectoris [International Journal of Cardiology]

Direct Epicardial Shock Wave Therapy Improves Ventricular Function and Induces Angiogenesis in Ischemic Heart Failure [Journal of Thoracic and Cardio Surgery]

Extracorporeal Shock Wave Therapy Reverses Ischemia-Related Left Ventricular Dysfunction and Remodeling: Molecular-Cellular and Functional Assessment [Intl Society for Heart & Lung Trans]

Ischemia

Low-Energy Shock Wave for Enhancing Recruitment of Endothelial Progenitor Cells: A New Modality to Increase Efficacy of Cell Therapy in Chronic Hind Limb Ischemia

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Noninvasive Shockwave-Induced Thickening of the Periosteum

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Wound Healing

Extracorporal Shock Wave Technology - New Approach to Treating Diabetic Ulcers: 18 - Month Follow Up [Wound Care Congress]

PACE (Pulsed Acoustic Cellular Expression) Technology: A New Approach to Treating Ulcers in Diabetic Patients

A Pilot Study of Pulsed Acoustic Wave Therapy (dermaPACE) in the Treatment of Mid-Deep Dermal Burns

Extracorporeal Shock Wave Therapy for Management of Chronic Ulcers in the Lower Extremities [Ultrasound in Medicine & Biology]

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