

## A Treatment Option for the Most Common Types of Pain

The targeted and effective use of **shock waves** in myofascial pain management

Muscle tension and trigger points in muscles, tendons and fasciae are causes of the widespread myofascial pain syndromes. Almost everyone is affected by them – acutely or chronically – in the course of their lives. A treatment with radial and focussed shock waves allows a pain diagnosis and therapy of the most common types of pain related to orthopaedic disorders: headache, neck and back pain, shoulder and arm syndromes, hip and leg pain as well as knee and foot complaints.

### A case report from practice

A 69-year-old man is referred to the Pain Centre because he suffers from lumbago with sciatica on the right side, resistant to therapy though without any neurological failures. He complains of a moderate permanent pain that grows massively when walking a maximum distance of 200 m after which he needs a break due to the pain. One year earlier he underwent hip replacement surgery because of the pain. Since the hip and leg pain persisted unchanged, a decompression of the spinal canal was carried out following an NMR diagnosis of the lumbar spine, but the pain symptoms did not improve.



Combined shock wave therapy system DUOLITH® SD1

### Clinical findings

Unrestricted mobility of the right hip joint. Distinct pressure pain in the middle of the right buttock, in lateral position massive pressure pain in the area of the M. piriformis upon pain provocation (radiating pain upwards into the lumbar spine and downwards on the rear side of the thigh into the calf), no neurological failures, lateral proprioceptive muscle reflex can be triggered.

### Diagnosis

Myofascial pain syndrome affecting the piriformis with additional neuropathic sciatic nerve (compression) pain ("mixed pain syndrome"). Diagnostic confirmation by means of focussed shock wave application in the area of the M. piriformis in lateral position. By locating the trigger points it is possible to release the typical "referred pain", i.e. the pain projection into the leg or into the lumbar spine that the patient feels.

### Therapy

In the first session, 3000 radial pulses (R-SW) of 1.6 bar and 15 Hertz were applied in order to relax the muscles and fasciae (area: along the entire piriformis muscle from the trochanter to the sacrum).



Relaxation of muscles and fasciae with R-SW as part of the piriformis pain syndrome therapy

Subsequently, the trigger points in the central muscle belly were treated with focussed shock waves (F-SW) (1000 pulses of 0.10 mJoule, 6 Hertz).



**Localization and treatment of trigger points with F-SW in piriformis pain syndrome therapy**

After the first treatment a "lighter feeling" as well as a pain relief when walking were already noted. After the second treatment (one week later) the patient stated an improved ability to walk a longer distance. After two more sessions during which the described combination of radial and focussed shock waves was applied, the patient was largely symptom-free. The pre-existing opiate therapy consisting of an oxycodone dose of 20 mg/day could be stopped gradually, the metamizole that had been prescribed on a permanent basis could be converted into an acute medication. The physiotherapy prescribed as an accompanying measure could already be ended after three sessions. The classical piriformis syndrome as a common (undiagnosed) cause of lumbago with sciatica could be diagnosed easily and treated effectively by means of radial and focussed shock waves. Duration of each shock wave session: 20 minutes (non-delegable duty of the doctor).

## Summary

Shock wave treatments are of great importance in orthopaedic pain management: They allow a targeted diagnosis and efficient therapy of myofascial pain syndromes, which are common and cannot be determined by diagnostic X-ray or NMR imaging. The STORZ MEDICAL DUOLITH® SD1 therapy system for the combined application of radial and focussed shock waves used by the author has proved itself in practice as versatile, robust and easy to handle. The treatment is very well accepted by the patients and is categorised as elective (requiring special information in writing and a contract with the patient). Direct advantages of shock wave therapy result from the considerable potential of cutting down on the consumption of analgesics (which are mostly expensive and of poor effect in the treatment of myofascial pain) and the prescription of therapeutic services (often required by the patient on a permanent basis). At the author's pain centre, shock wave application has become indispensable both for diagnosing (first-line examination in the case of unexplained pain syndromes) as well as for treating pain of the musculoskeletal system.

## Author:

Dr. Stefan Kammermayer,  
Head of the Association of Pain  
Management Experts of Bavaria INSTIB,  
Head of the Ambulant Pain Centre  
Munich-Nymphenburg  
of the Barmherzigen Brüder Hospital.

## Information:

STORZ MEDICAL  
[www.storzmedical.com](http://www.storzmedical.com)

Source: This is a translation of an article that originally appeared in German in "Orthopädische Nachrichten" 12.2011