

## Radial shock wave therapy

Innovative technologies for enhanced **treatment success**

In the past 11 years, radial shock wave therapy has established itself as one of the most successful forms of therapy in orthopaedics. In addition to the conventional pain therapy of tendon insertions, the treatment of myofascial pain syndromes has become an important field of application for radial shock waves. In my capacity as an IGOST (Interdisciplinary Society for orthopaedic and trauma surgery pain therapy) founder member, I have worked with this therapy for over 15 years. In our treatment centre, the development of shock wave therapy was clinically and scientifically accompanied.

At the beginning of the nineties, we applied shock waves for the first time in pain treatment. For this purpose, we founded an association together with 17 colleagues and purchased a large shock wave system. In 2000, we opted for the Swiss DolorClast® of EMS Medical – a cost-effective therapeutic alternative to large-scale equipment. At the beginning of 2011, we changed over to the MASTERPULS® MP200 of STORZ MEDICAL.



By the introduction of new materials like titanium and ceramics and the use of vibration technology, this system opened up and enlarged our therapeutic spectrum. The titanium shock transmitter, for



instance generates a power that is about 25% higher at identical energy input. With deep trigger points, in particular, this solution offers substantial benefits. The ceramic material is ideally suited for patients that are extremely sensitive, as the pain on treatment can be considerably reduced at identical power level. The vibration- and massage function is a new feature for us and perfectly supplements the therapy process.

Thanks to the use of new materials, we succeeded in improving the good and excellent results obtained in our observational study comprising 70 patients with standard indications from an average of 82% to over 90%. At the same time, the number of treatment sessions was reduced from an average of 5 to 3.5 sessions. With the application of ceramic shock transmitters for patients that are extremely sensitive to pain, the number of patients deciding to discontinue treatment was substantially reduced. In addition, more patients could successfully be treated in close-to-bone soft tissue. The overall therapeutic concept is perfectly rounded off by the vibration and massage technology and meets with general acceptance and high patient satisfaction. With the introduction of this new technology, the frequently discussed topic of »tissue engineering« for the treatment of reduced skin elasticity, cellulite and scars has made its way into our daily routine.

### DISCUSSION

By the use of innovative technologies combined with a wide variety of materials, radial shock wave therapy

allows different effects to be generated. However, the positive results obtained in practical application have not yet been confirmed by scientific studies.

About 30 years ago, focussed shock wave therapy with large systems marked the beginning of a new era in pain therapy. Today, these large-scale shock wave systems are predominantly used by highly specialized medical centres. In medical practices, more compact and cost-effective systems with pneumatically generated radial shock waves are frequently applied. With new transmitter developments, highly innovative and competition-oriented companies create the fundamentals for trend-setting therapy concepts. I am deeply convinced that shock wave therapy is just in the early stages of its development and has the potential for a promising future.

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