

MED TECH

EUROPE SPECIAL

OUTLOOK

ORTHOPEDIC
EDITION

ELECTRO MEDICAL SYSTEMS

REVOLUTIONISING
ORTHOPAEDICS WITH
COMBINATION THERAPY

\$15



COMPANY
OF THE YEAR

Electro Medical Systems



*The annual listing of 10 companies that are at the forefront
of providing Orthopedic solutions and impacting the industry*

ELECTRO MEDICAL SYSTEMS

REVOLUTIONISING ORTHOPAEDICS WITH COMBINATION THERAPY

Ever wondered how professional athletes heal so quickly from medical conditions, such as plantar fasciitis or Achilles tendon rupture? Let's see how.

Say a basketball player is experiencing patellar tendonitis (jumper's knee) in the middle of a season, for instance. The primary focus of the medical team would be to render the first-line treatments, including resting, icing, therapeutic exercises, bracing and orthotics, and so on. If the injury is not responding to those standard non-operative treatments, the medical team then has to consider the more-invasive approaches, like percutaneous needle tenotomy or surgical debridement, which involves cutting and removing the wounded tissue. While such treatments are often successful, they are associated with increased risks and extended recovery periods, which can effectively end an athlete's season. That's where extracorporeal shockwave therapies (ESWT) come into the picture. Between non-operative and more-invasive treatments, ESWT is an ideal intermediate option for medical teams and athletes alike.

ESWT was introduced into clinical practice in 1982 to manage urologic conditions. These shockwaves were initially used to break kidney stones or calcifications in arteries and soft tissues. Undergoing significant technological advancements over the years, today, ESWT not only can successfully address complex tissue injuries of athletes





but also common musculoskeletal disorders of other patients, with minimal recovery periods.

On that front, a precision medical device manufacturer that has been carving a niche by paving such optimal and swift recovery pathways for international athletes via

ESWT is Electro Medical Systems

(EMS). Notably, EMS has four decades of expertise in engineering and manufacturing precision medical devices for sports and rehabilitation, dental prophylaxis, and endourology. Many elite athletes, with podium placements, championship titles, and more, have been treated worldwide using EMS's shockwave solutions. "Over the years, we have helped medical teams globally use EMS's innovative ESWT devices, evidence-based research, and world-class player care and welfare service," states Jean-Christophe Prandi, Head of Business Unit Pain Therapy at EMS.

Now imagine, wouldn't it be great if non-athletes could also benefit from these advanced treatment approaches?

Interestingly, EMS has been solving this quest as well by concurrently democratising ESWT technology over time. Driven by the Swiss tradition of precision and craftsmanship, the company is indeed becoming a pioneering player in the ESWT space by enabling the application of these advanced ESWT techniques in healthcare practitioners' physiotherapy and rehabilitation efforts for the general populace.

A Trailblazer in the ESWT Space

It all started in 1998 with the launch of EMS's Swiss DolorClast® method, which caters to the treatment of a variety of musculoskeletal conditions. The advent of the Swiss DolorClast method marked the beginning of using radial shockwaves in the orthopaedic field. The method consequently kicked off a whole new area of treatment in orthopaedics and subsequently opened up the field for healthcare professionals beyond physicians and surgeons, like physiotherapists, osteopaths, chiropractors, and podiatrists. "With the Swiss DolorClast method, these healthcare practitioners got an advanced tool to treat most of their patients' orthopaedic indications in a much more effective way," cites Prandi. At the same time, EMS has also been making sure that they complement this one-of-its-kind therapeutic method with a unique and innovative range of radial and focused shockwave therapy products, handpieces, and accessories to achieve exceptional treatment outcomes.

Later, in 2013, EMS launched the Swiss DolorClast Academy (SDCA) to promote this DolorClast method and products. SDCA has been since offering over 200 training workshops worldwide each year. Leaning on such significant initiatives, EMS has already reached more than 100 million patients currently with its shockwave technology and devices.

Guided DolorClast Therapy – Taking ESWT to the Next Level

Taking it up a notch higher, EMS has upgraded the Swiss DolorClast method to a holistic treatment concept today – Guided DolorClast Therapy (GDT).

EMS launched GDT in 2020 after an extensive combined effort with a progressive network of sports and rehabilitation medicine professionals. Rooted in deep scientific research and enabled by peerless performance devices, GDT attains enhanced treatment outcomes through a six-step guided approach. By applying GDT in regular physiotherapy and rehabilitation, healthcare practitioners could safely, swiftly, and successfully treat 90 percent of their patients suffering from a musculoskeletal disorder.

The first step in GDT empowers practitioners to effectively assess their patients and engage with them to comprehend the underlying indication. This step not only ensures the most optimal results but also gives patients a deep understanding of the treatment protocol that they are going to receive. Then, the second step involves the usage of DolorClast High Power Laser, which is primarily used to offer both an analgesic effect as well as an anti-inflammatory effect. “Shockwave therapy is limited by the patient’s tolerance to pain while applying high-intensity shockwaves. Our laser device enables us to administer up to 50 percent more energy intensity shockwaves than usual,” notes Prandi. The third and fourth steps entail the delivery of radial and focused shock waves to the injured tissue using DolorClast Radial Shock Waves and DolorClast Focused Shock Waves devices, respectively. Remarkably, the DolorClast Radial Shock Waves is the most potent radial shockwave device in the market currently. Adding to it is the technical design of the Swiss DolorClast BLUE handpiece, the only handpiece to deliver constant energy flux density (EFD) output across the entire frequency spectrum. Together, they enable practitioners to achieve 200 percent more energy density (at a frequency of 15 Hz or above) and maximum pressure than other competing devices in the market.

On top of these, the strength of GDT lies in the rehabilitation program as well, which comes as the fifth step. It can be set up at the discretion of each practitioner and found to have significantly improved clinical outcomes. After rehab, the sixth and final step in GDT involves follow-up that allows the practitioners to keep patients within the practice so that the pathology doesn’t reoccur.

Briefing on this comprehensive approach, Prandi asserts, “Typically, medical devices companies deliver a device and leave. However, we are a cut above the rest as we guide practitioners through each step to simplify their practice workflow and attain enhanced clinical outcomes.”

Empowering Practitioners to Improve Clinical Outcome

How GDT is elevating ESWT can be best reflected in a recent case study of a 62-year-old patient with bilateral plantar fasciitis. The treatment was carried out by a physiotherapist, Matthieu Cambier, who has more than two decades of expertise in rheumatology.

Cambier diagnosed that the patient had bilateral plantar fasciitis after considering the medical history and physical examination. During each session, Cambier administered a three-minute high-power laser protocol to the painful area—the anterointernal edge of the heel—with DolorClast High Power Laser. “I only used it on the right side, which was more painful,” remarks Cambier. Since he used laser, Cambier didn’t have to use analgesic drugs on any session. After laser protocol, he applied radial shock waves to the area. “At the time of the treatment, the patient stated that he felt more comfortable when the radial shock waves were applied to the pre-treated side with laser, underlining the value of the combined approach of the Guided DolorClast Therapy,” Cambier adds.

In this particular case, the practitioner used radial shock waves again in the next step rather than focused shock waves. And as part of the rehabilitation step, Cambier advised the patient to do exercises, such as feet stretching using an elastic band and self-massage of the feet with a tennis/golf ball. During the follow-up, a reassessment was performed at the start of each session. “A significant improvement was noted at the beginning of the third session, and the patient was able to resume his daily activities without difficulty as early as the sixth week of treatment,” enthuses Cambier.

Owing to such expansive competencies, EMS DolorClast devices are used by researchers worldwide today to study the further implications of shockwave treatments. No wonder they are utilised in more studies listed in the Physiotherapy Evidence Database (34 clinical studies out of 62) than any other ESWT device.

As the effectiveness of ESWT is completely dose-dependent, EMS’s cutting-edge DolorClast equipment is becoming pivotal for practitioners to accomplish excellent therapeutic outcomes. Adding to it are the world-class educational programmes and scientific backing that EMS boasts. Thus, while ushering in a new era of ESWT, EMS promises to bring in game-changing value for healthcare practitioners and patients alike. 

For more information, visit www.ems-dolorclast.com

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