SAVE TIME WITH THE UNATTENDED HANDSFREE SONO® APPLICATOR

Ultrasound therapy is a non-invasive therapeutic method that uses the mechanical energy of longitudinal waves penetrating deep into the soft tissues of the human body. This energy is generated by activation - oscillation of a crystal located in the applicator head. These oscillations are transmitted from the ultrasound applicator to the surface of the human body via a contact medium - gel. The mechanical waves are absorbed by the tissues and are converted into thermal energy, simultaneously providing a micro massage. Ultrasound therapy is mainly aimed at relaxing muscle and connective tissue (ligaments, tendons and fascia), increasing local blood circulation and reducing swelling, which contributes to healing process acceleration.

HandsFree Sono[®] is a device based on multi-crystal applicators with a unique technology of creating a rotating ultrasound field without the need for therapist intervention. This applicator developed by BTL is part of the new BTL-4000 Smart and Premium series. The ultrasonic crystals within the applicator are arranged in two rows and are controlled by a processor unit. The ultrasonic rotating field is generated by sequential activation of the crystals, and the processor at the same time controls the rotation speed, output power, and penetration depth of the ultrasonic field for each crystal in the real-time. The effective irradiated area can be set to up to 18 cm2 and can be changed by deactivating individual crystals. Two modes can be used, circular or random, where two corresponding ways of crystals switching are used. The switching time of each crystal is 0.3 s, 0.5 s, and 0.7 s. Depending on the treatment conditions, the device can now operate with alternating frequencies of 1 and 3 MHz.

After setting the therapy parameters on the device, the applicator is attached directly to the patient's body with elastic bands and the therapy is then started. From this moment on, the therapy takes place without the need for therapist intervention. Thanks to the automatic switching of the ultrasonic crystals, the applicator simulates the therapist's movements. This system saves the therapist time and effort while eliminating their mistakes that could possibly result in burns. The ultrasound dose is evenly distributed over the entire treatment area. All these advantages are available thanks to the rotating ultrasonic field technology.







STATISTICAL EVIDENCE OF TIME SAVINGS WITH HANDSFREE SONO®

The HandsFree Sono[®] ultrasound applicator is one of the new devices used at the Rehabilitation Center Kladruby. Its effectiveness in saving the therapist's time was investigated here. The Center has compiled statistical data on the use of HandsFree Sono[®]. The duration of therapy was 5, 6, 7, 8, and 10 minutes.

The time (in minutes) of each individual therapy session over 89 working days (8 April - 14 August 2015) was recorded and finally the total time over the 19-week period was calculated (see Chart 1 and Chart 2). These statistics demonstrate the benefits of using the HandsFree Sono[®] applicator when compared to standard devices and place it among the physical therapy modalities that do not require therapist intervention during therapy.

ONE UNATTENDED HANDSFREE SONO® APPLICATOR SAVED 3 WORKING WEEKS (15 WORKING DAYS) OVER 19-WEEK PERIOD.

905 DAYS OF UNATTENDED OPERATION





REHABILITATION CENTER KLADRUBY



The Rehabilitation Center Kladruby is a state-funded organization, directly managed by the Ministry of Health of the Czech Republic. The Centre has a long tradition of providing comprehensive rehabilitation care and offers treatment to patients after surgery or injuries to the musculoskeletal and nervous system. It is one of the largest and most important facilities in the country and operates on the nationwide level.

The Rehabilitation Center Kladruby is well known for working with state-of-the-art equipment. Thanks to the use of the latest technologies, it helps to maximize the efficiency of rehabilitation processes.

At the end of 2014, new advanced devices, including BTL products, were purchased through the EU Medical and Rehabilitation Care Innovation Project in order to upgrade and improve then-current medical equipment infrastructure at the Center.