High Medical Technologies
do Brasil Ltda

Research and Development of Shockwaves

The first medical use of shockwaves was patented by Dr. Frank Rieber in the USA as early as in the 40s, but only in the 70s a group of engineers with Dornier testing aircraft materials rediscovered the properties of shockwaves;

In collaboration with clinicians at the Munich University Hospital an new alternative to traditional surgery was found for the removal of kidney stones in 1981; this new technology is based on shockwaves created outside the human body, and transporting the energy generated inside the body via a water bath or cushion; this energy was directed and focused to the renal stones which due to the impacts of the acoustic shocks started to disintegrate and pulverize into sand-like particles which left the body in natural ways; this new non-invasive technology was called extracorporeal shockwave lithotripsy (ESWL);

During the clinical investigation of any possible side-effects of lithotripsy physicians and physicists discovered the stimulative effects shockwaves had on surrounding tissues ; in stead of the feared damage to the bone structure they observed increased bone growth;

Intensive research was then able to explain the important relationship in the treatment of pseudarthrosis, tendinosis, epicondylitis and soft tissue pains; recent basic research show changes in the molecular biological structures and enzymatic effects ; to the industry, the dose-energy relation to bring about the wanted healing effects are of fundamental importance, creating a challenge to physicists to obtain the exact physical parameters, energy-characteristics and formation of the shockwave.

On the other hand, basic and multidisciplinary research, pilot and case studies will show the wide range of applications which may be covered and uncovered with shockwaves, and which has shown to go well beyond the area of orthopedics or urology; it is only the beginning of a new and interesting era in medicine with many positive surprises.

HMT , the Company

The success of advanced medicine is based on relevant reliable and safe medical devices and compliance of established medical procedures and protocols ; for reasons of responsibility towards patients, users, operators and medical staff, HMT´s prime mission focuses on efficient quality control and reliable manufacturing, embedded in a structure of quality procedures such as ISO standards and GMP, without loosing flexibility and innovation as important assets.

HMT was founded in 1987 by a Team of 4 young professionals :

Karl Heinz Restle, Joachim Voss, Werner Schwarze and Walter Übelacker

Kreuzlingen, the location chosen near Lake Constance in Switzerland, offered excellent commercial and technological facilities for a starting high tech medical company ; the financially and politically stable environment, complemented by highly trained technological staff and competent partners and suppliers, formed the solid basis for dynamic growth and respect in the market.

HMT, High Medical Technologies, stands for

“Safety and Efficacy with Comfort and Economy”

High Medical Technologies
do Brasil Ltda

Milestones

1987 Company HMT AG is founded in Oberaach – Switzerland

1988 HMT designs and produces first generation of electrodes for use in lithotriptors

1989 Development and market of AlexanTriptor – Alexandrite laser lithotripter
Foundation of German Subsidiary HMT GmbH, first branch outside Switzerland

1990 AlexCope and EndoScreen, flexible and controllable 2.8 mm thin uteroendoscope

1991 Start of collaboration with Philips Medical Systems to develop Shockwave generators

1992 First Shockwave Unit for Orthopedic applications – OssaTron – to stimulate bonegrowth

1993 Production of Philips Lithotriptors LDM in progress

1994 HMT develops its own Lithotriptor, called LithoTron

1997 HMT obtains FDA approval for the introduction of the LithoTron to the USA market
HMT gains ISO certification in conformity with ISO 9001

1998 HMT launches the ReflecTron, the world´s smallest shockwave unit for Orthopedy

1999 HMT HealthTronics Services Inc. is founded in the USA
HMT AG moves to Lengwil in Switzerland
Launch of the EquiTron shockwave device for veterinarian purposes

2000 Ossatron receives FDA approval as first orthopedic device for chronic plantar fasciitis
LithoTron is approved for use in Japan

2001 HMT develops the third generation of shockwave units for orthopedics / sportsmedicine called EvoTron, and VersaTron for veterinarian medicine

2001 Launch of the LithoDiamond, the first lithotripter based on HMT´s system components

2002 Introduction of Veterinarian systems by HMT USA for the USA market

2003 FDA approval for chronic lateral epicondylitis for the OssaTron ; Ossatron being the only and first device for multiple indications approved by the FDA

2004 HMT AG and HealthTronics, successful litho service provider in the USA, announce their common intention to intensify the collaboration via a swap in shares, formalized in June

HealthTronics and PRIME MEDICAL announce their merger agreement which is completed in December 2004 ; the new organization will continue its operations as HealthTronics

2005 **new management of HealthTronics decides to focus on lithoservice activities and divest the Orthopedic Business Unit in the USA to SanuWave Inc., however maintaining a HealthTronics Europe Branch, residing in HMT´s old premises in Kreuzlingen, to attend export and orthopedic businesses ; from this address all export businesses – systems, parts and consumables - will be delivered under the same brand and labels as HMT Brand ; it is expected however, that the Litho systems development and production will be transferred elsewhere in the near future.**