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Shockwave therapy with the VARIO LOGIC technology (VLT) in the 'Likawave Vario 3i' from Likamed

Shockwaves were first used in medicine in the 1980s as a non-invasive procedure for lithotripsy. Since then, the range of applications exploiting this mechanism of action has been extended to include the treatment of calcium deposits in the shoulder, salivary gland stones and gallstones, and heel spurs. By changing the therapeutic parameters, many other indications have been added in recent years. These range from the treatment of sports injuries, pseudarthrosis and poorly healing wounds to acupuncture using shockwaves and cosmetic skin treatments such as cellulite reduction.

Our own studies have shown that activating mechanoreceptors in the cell membranes triggers a comprehensive cascade of reactions known as mechanotransduction. These reactions include the release of endorphins and reactive oxygen species as well as influencing cells by migration, gene expression and enzyme activation.

The newly developed Wide Focus technology describes a shockwave that is concentrated within an energy channel that penetrates deep into the tissue. The use of applicators with varying dimensions enables the diameter and penetration depth of the Wide Focus technology to be adjusted.

The high penetration depth is achieved by very high energies that can be comfortably tolerated by the patient thanks to the various Vario modes (inverted triangle, pulse).

Likamed exploits this technology with the VARIO LOGIC Technology (VLT) for the new unit Likawave Vario 3i unit, offering a true innovation.

The special feature of this technology developed by Likamed is an intelligent cell-protective mode in which the intensity and frequency can be dynamically varied between defined limits during treatment in a programmed cycle. The application can be modified for each patient

depending on their pain perception, enabling ideal responsivity. The body cells reached with the different therapies are protected. At higher frequencies and energies, the therapy is more efficient, while the patient can briefly recover during the therapy when these parameters are at their minimum. This optimal energy and frequency range is so important because shockwave therapy is virtually ineffective at low energies and at higher energies cells can even start to be destroyed. The Vario mode of the Likawave Vario 3i has been designed precisely for this mid-range energy and frequency, which is modified for each therapy and patient. Patients usually benefit immediately from this very gentle process with a reduction in pain, because the result is clear. Treatment with the Likawave Vario 3i is generally found to be pleasant and well-tolerated, even when applying higher energies, so healing can begin more quickly and treatment is much more efficient. This is seen with acute sports injuries. Patients with strains in thigh and calf muscles could return to training virtually pain-free after four days.

In conclusion, the first application of the Vario mode in shockwave therapy has proven to be very effective with a very positive effect on patient compliance. In this type of application, patients accepted higher energy, which is beneficial to the healing and regeneration process. Acceptance of the Likawave Vario 3i unit was considerably greater among all patients. With some other ESWT devices a diffuse internal pain develops, a symptom that was not observed with the Likawave Vario 3i.

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