

BASICS AND PHYSICAL DETAILS OF THE RADIAL (UNFOCUSSED) SHOCK WAVE DEVICE IN COMPARISON TO THE COMMON FOCUS DEVICE

Henne M., Gerdesmeyer L.

INTRODUCTION:

Experts always complained about radial shock waves that they won't have similar influence on the tissue than the focussed one. We tried to prove the physical effect in the experimental way.

MATERIALS AND METHODS:

We used for investigation the hydrophon measurement, Schlieren optic and the chalk crushing test.

RESULTS:

We found out that the radial shock wave curve is similar to the focussed one. We could also prove that there is the effect of releasing cavitation bubbles and a positive reaction in the chalk test.

CONCLUSION:

There is similar effect of the radial unfocussed shock waves to the focussed one. The maximum energy flux density only achieves the middle energy level which doesn't allow to treat all indications but is sufficient for enthesiopathies and muscle injuries.

EXPERIENCES IN TREATING ENTHESIOPATHIES WITH RADIAL SHOCK WAVE THERAPY

Henne M., Gerdesmeyer L.

INTRODUCTION:

Shock wave therapy for orthopaedic indications is known for almost 20 years. Since 1999 exists the radial (unfocussed) shock wave treatment which differ to the focussed in source and application.

MATERIALS AND METHODS:

In several clinical studies we tried to show an improvement after treating plantar fasciitis, tendinitis of the shoulder, epicondylitis, achilles tendinopathy, tibia edge syndrom and jumper's knee. Main criterias were Visual Analogue Scale (VAS) and Roles- and Maudsley-Score.

RESULTS:

There was a significant improvement in all our studies with a follow up in between six weeks and one year. Besides petechial bleedings or severe pain we had no side effects.

CONCLUSION:

Radial extracorporal shock wave therapy is an noninvasive procedure with no relevant side effects and therefore a good option in treating chronic, therapy resistant enthesiopathies. The mode of function is still not completely proven. Therefore further experimental studies are required.