

Pain Removal Protocols, examples:

### **TENNIS ELBOW: chronic lateral epicondylitis**

Use only the 5mm head only because this is a superficially located indication. The 20mm head is hardly ever used on tennis elbow or achillodynia. Give 1,000 pulses at energy level 4 after first injecting a local anaesthetic. This takes 5 minutes.

With some patients a reasonable or slight improvement with less pain can be noticed after about a week and to become complaint free and completely cured takes at least 4 to 6 weeks or even more. About 70% of patients are cured with one treatment. There may be a second treatment after 6 weeks for some patients. It is important that after the treatment the patient keeps using their arm without a sling or a cast. Use the elbow and arm in a sensible way so that it is self-improving and developing the vascularisation. Do not overstrain it or carry heavy things for too long or too far in the first 4 to 6 weeks. Depending on the sort of work that is done, one could slowly get back to normal, as before the tennis elbow pain, after one to two weeks. Not only the patient but also the employer likes this quick return to normal function. Be careful to avoid too many repetitive movements such as suffered by computer-mouse operators, supermarket cashiers, plumbers, carpenters, truck drivers, painters wielding a brush, nurses helping patients in and out of bed, housekeeping jobs such as vacuum cleaning, dishwashing, window cleaning, etc. Change the type of continuous movement often.

Overall results show a total cure for more than 70% of patients.

### **HEEL SPUR chronic plantar fasciitis (the most painful treatment for patients)**

Use the 20mm head at energy level 7 and give 1200 pulses, more rather than fewer, which takes 6 minutes with CellSonic. Use a higher power level than with tennis elbow to make a bigger area emanating from the shockhead at the point of maximum pressure.

Use a local anaesthetic or sometimes a block when it is too painful.

After about a week, less morning stiffness is the first sign of improvement. Complaint free comes after 4 to 6 weeks, occasionally longer.

With heel spur a second treatment is given after six weeks in about 40% of the cases.

The patient should help themselves for the first 4 to 6 weeks after treatment by walking a little during the day, maybe doing only half of what they were used to and trying to build it up slowly, getting rid of crutches, no cast, maybe soft sport shoes. No walking on bare feet, no jumping, no standing on one spot for too long, no sports like tennis,

athletics etc. When the heel is hot, cool it with an icepack for 15 to 20 minutes, resting the foot high up on a chair. Typical sufferers are pregnant women, people who are overweight, waiters, fanatic athletes, those wearing the wrong shoes, e.g. high heels, heavy industrial protective shoes, etc.

A third treatment is not often needed with most heel spurs. Overall results about 75% are cured.

## **SHOULDER CALCIFICATION**

### **chronic calcific tendinitis of the supraspinatus**

Use the 20mm head and give 1200 pulses at energy level 6, more rather than fewer, which takes 6 minutes with CellSonic Electro-Hydraulic shockwaves.

The locations of the calciferous deposits will be determined by palpation or Ultrasound.

Improvement will show after a week. To be totally cured or complaint free always takes 4 to 6 weeks at least.

There are good results in about 75 % of the cases, with one or two treatments depending on the number of calciferous deposits scattered in the supraspinatus. Intervals between treatments are preferably 6 weeks. A third treatment for calcified shoulder is quite rare.

Wear no sling or cast. The patient has to stay in motion with his/her treated arm-shoulder from day one. Certain exercises will be given for the first 4 to 6 weeks.

No lifting of heavy items, nor children etc. and definitely not with the arm above shoulder height. Avoid resting the arm/elbow on arm rests, such as in a car. Never try to lift one's body out of a chair by pressing the elbow towards the armrest of the seat when getting up.

The more the still swollen tendon is pressed against the shoulder bone, the more painful it will be. Trying to let the arm hang loose alongside the body is best.

Avoid repetitive movements for too long as with tennis elbow. Try to vary the movements or stop when the shoulder starts hurting again.

### **One thing is important.**

With CellSonic VIPP, a definite inflicted trauma in the soft tissue of the treated patient is clearly the case. The complete healing, including the restoring of the healthy tissue and the revival of new tissue as

replacement for severely crushed scar tissue and making new micro blood vessels, regulating vascularisation and strengthening of tendons, muscles and ligaments, etc. takes at least 6 to 8 weeks.

### **Protective Procedure using Shockwaves after Anaesthetic**

Although CellSonic VIPP is a totally non-invasive procedure, the anaesthetic is not. The usual anaesthetic is lignocaine given by injection and maybe a series of injections around the area to be treated. This leaves the skin punctured.

All medical practice now works on the basis that blood is contaminated until proven otherwise so do as follows:

First of all, after use the needle must be immediately destroyed with the Lifeguard-Rakshak incinerator and the syringe tip cut off.

Secondly, fit a protective sheath on the shockhead. There might be no seepage of blood from the fine injection holes but nevertheless prevention is sensible and a courtesy to your patient. Not only must you avoid cross infection but the shockhead must not be contaminated and the patient should see that nothing can cross from the head to themselves.

1. Smear ultrasound gel around the end and sides of the shockhead
2. Pull a big condom over the shockhead or use cling film as explained for wound healing.
3. Check that no air bubbles are trapped under the opaque latex; shockwaves do not go through bubbles of air.
4. Smear CellSonic gel on the end of the head now covered by the condom and on the area to treat on the patient; then proceed with the treatment.
5. After the treatment, remove the sheath carefully so that it comes off inside out. A few specs of blood can sometimes be seen most usually with heel spur treatments. Dispose of the sheath in the hospital's secure bin.
6. Wipe the gel from the shockhead.