SUN Orthopaedic Group, Inc.

SHOCKWAVE THERAPY FOR TENDINOPATHY

Background:

Shock wave therapy (SWT) as it is used to treat musculoskeletal conditions initiated in the mid 1980's in German. Today it is quite popular in Europe and South America.

SWT was initially used in urology as a method of disintegrating gallstones and kidney stones. The procedure was quite effective and musculoskeletal applications were soon developed.

SWT is noninvasive, extremely safe, and generally effective for the treatment of tendon injuries. The procedure is usually performed in the office without any form of anesthesia, is well tolerated, and yields few complications.

How it Works:

SWT has three generally accepted mechanisms of action. Repetitive application of shock waves causes a transient decrease in pain neuron function. This results in a temporary decrease in pain that lasts for several days up to several weeks.

Next, the body responds to SWT by creating additional blood vessels in the treated area. One of the reasons tendons are slow to heal is because most tendons have a relatively poor blood supply. Increased blood vessel formation is associated with tendon healing.

Finally, SWT leads to the stimulation of growth factor release. Growth factor concentration in the treated tissues is significantly increased and this has an anabolic effect on the treated tissues.

Indications:

SWT is indicated for individuals who have failed 3-4 months of traditional nonoperative treatments. Numerous scientific studies have shown it to be a very effective treatment for plantar fasciopathy, Achilles tendinopathy, patella tendinopathy, lateral epicondylitis, medial epicondylitis, calcific tendonitis of the shoulder, shin splints, posterior and peroneal tendon tendinopathy, stress fractures, trochanteric bursitis of the hip, as well as other conditions.

Procedure:

The procedure is performed in the following manner. The skin overlying the area of intended treatment is prepped with ultrasound gel. The targeting device of a commercially available shock wave generator is then coupled with the skin. A specified number of shock waves are then emitted. The procedure is almost always performed without any use of anesthesia.

Recovery:

Early recovery is rapid. Patients are usually able to return to their previous work activities the following day. Low-impact sporting activities can be resumed soon after the procedure.

That said, complete recovering from SWT, is a gradual process. The increased blood supply and growth factor concentration gradually "turn-on" the healing response. The damaged tissue begins to rebuild and remodel. This generally requires several weeks and most people can expect maximum improvement to occur approximately 3-6 months after treatment.