

Use of Pulsed Signal Therapy for the treatment of pain and functional limitation in the context of arthritic degenerative pathology

De Polo C.; Trenca I.; Frasca M.G.; Rocconi F.; Zorbo S.; Santucci M.; Caraccio V.; Ceccobelli M.; Lazzari M.

Pulsed Signal Therapy (PST®) is a non-invasive method which reproduces physiological signals lost in an imbalanced situation of the extra cellular cartilaginous matrix.

It has already been demonstrated that exposure to pulsed magnetic fields with low frequency (PEMF), created by PST® technology enables the chondrogenic differentiation and the synthesis of proteins in the extra cellular matrix of the conjunctive tissue.

Equipment and method

We treated 135 patients in our Physiopathology and Pain Management Centre from January 2006 to March 2007: these 135 patients were divided in two groups of pathologies:

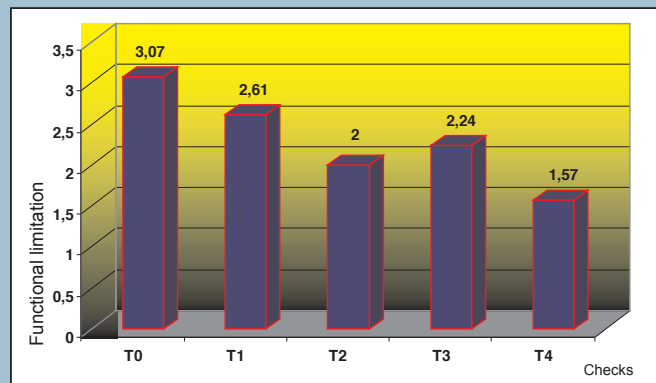
- 86 patients with Gonarthrits and,
- 49 patients with Coxarthrits.

Every patient underwent a series of 9 treatment sessions, of one hour each, over five consecutive days.

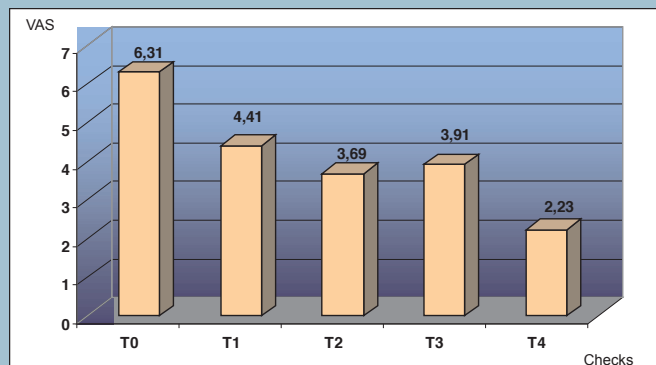
The equipment used generates a direct pulsed current based on a special diode which operates with variable modulation and duration of the pulsations in an intensity range up to 12.5 Gauss and a frequency between 1 and 30 Hertz.

Our protocol prescribed that the patients would be questioned with the WOMAC questionnaire (Western Ontario and McMaster Universities Osteoarthritis) before the start of the treatment (T0), at the end of treatment (T1), one week later (T2), six months later (T3) and one year after the end of the PST treatment (T4).

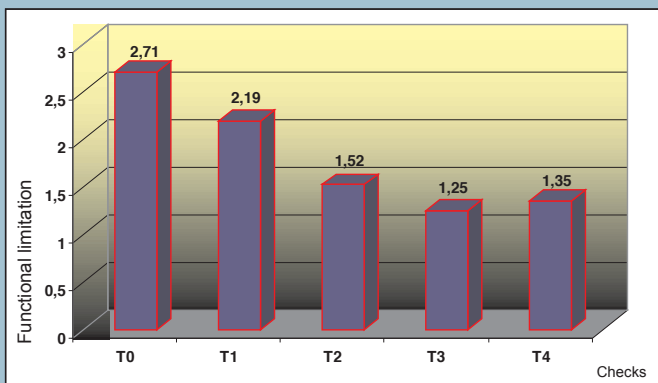
COXARTHROSIS



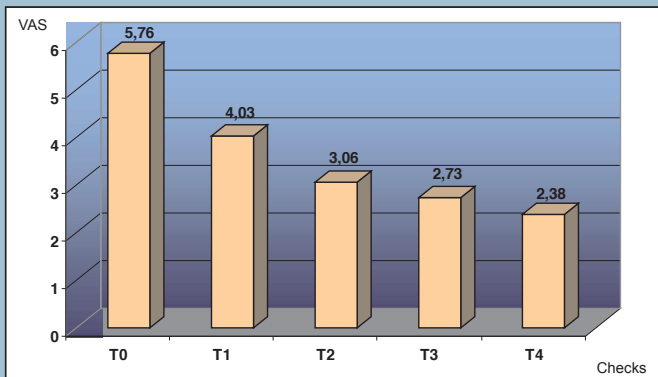
Evolution VAS



GONARTHROSIS



Evolution VAS



Results

During the control visits planned in the protocol we analysed the V.A.S. (Visual Analog Scale) for the evaluation of pain and mobility in the study of the therapeutic response of the PST® for the two patient groups.

We have observed a significant decrease in pain with a lower VAS, and therefore a significant improvement at motor deficiency level in both groups.

Conclusions

Our experience demonstrates that the PST® is a physiological, non-invasive method which relieves pain and improves the mobility of patients suffering from a degenerative arthritic pathology.

