

INDIBA® Monopolar capacitive / resistive radiofrequency 448 kHz (INDIBA® activ Therapy), working as a Rehabilitation Therapy in Sports Medicine

Retrospective analysis of its application in a Sports High Performance Center (CAR Sant Cugat, Barcelona) during the period 2009-2011



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INTRODUCTION

Intensive sports practice, typical of elite sports, causes a significant **incidence** in the musculoskeletal system injuries.

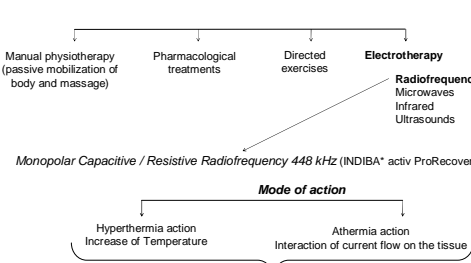
30 - 50 % of sports lesions are caused by an excessive use of soft tissues. 50 - 70 % are distributed between incorrect trainings, overtaxes and/or bad or null use of protection.

80 % of the suffered injuries during sports training involve the soft tissues (muscle, tendons, ligaments and joints). The other 20% involves injuries of other body structures.

Main objective of the medical treatment



Therapeutic alternatives

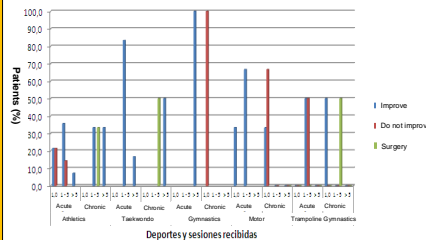


Increment of: biostimulation, vascularization and tissue hyperactivation

RESULTS

SPORTS PRACTICED

Análisis del tratamiento INDIBA activ ProRecovery según el deporte practicado



Differences in the evolution of the injuries depending on the sports practiced. Analysis of the sports with a highest incidence (n ≥4).

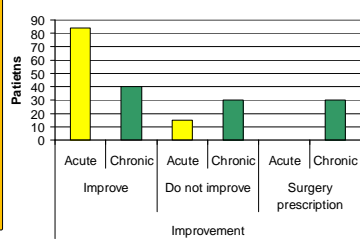
CAR Sant Cugat



Sportsmen training in the High Performance Center (CAR) facilities in Sant Cugat (Barcelona)

INJURY CONDITION: Acute / Chronic

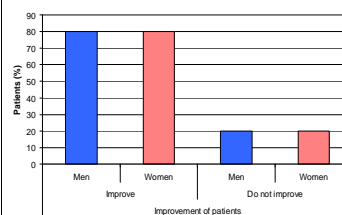
Response of the patients



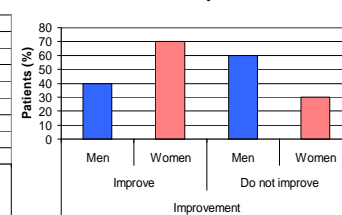
Acute injuries evolve better than the chronic ones.

CONDITION OF THE INJURY DEPENDING ON THE GENDER

Percentage of patients who improve in ACUTE injuries



Percentage of patients who improve in CHRONIC injuries



Gender is not important regarding the evolution of the acute injuries, but it has an influence in the chronic ones, where women evolve better than the men.

MATERIALS and METHODS

60 patients (34 men and 26 women) with a **mean age** of 24 +/- 5 years .

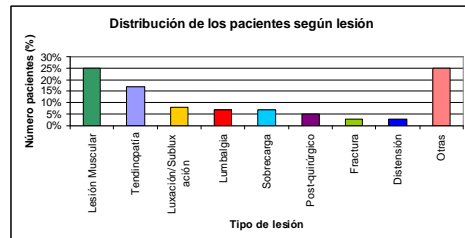
Inclusion criteria:

- Age: 15-30 years old
- Confirmed medical diagnosis.
- Musculoskeletal system injuries.
- Have received one or more complete sessions of the treatment (> 20 minutes).

Exclusion criteria:

- Injuries from non-sportive origin.
- Concomitant treatments without identification.
- Non-justified relinquishment.
- Incomplete critical data (diagnosis, treatment definition, results...).

Muestra



Device:

INDIBA activ ProRecovery HCR 902 (Maximal power capacitive / Resistive 450 VA /200 W).

Session's length:

Personalized by the physiotherapist. Minimal 20 minutes.

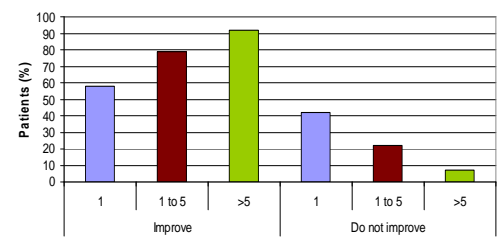
APPLICATION OF INDIBA® activ THERAPY



Physiotherapist applying the technique INDIBA® activ Therapy.

NUMBER OF RECEIVED SESSIONS

Evolution of patients according the number of sessions



Patients who have received a higher number of sessions, have better results in their evolution.

Received treatments:

- INDIBA +
- Pharmacological treatments (when necessary) +
- Manual therapy +
- Physiotherapy +
- Diacutaneous fibrolysis +
- Massage therapy.

Controlled variables:

- Subjective:** Interrogation of the patient done by the physiotherapist.
- Objective:** Application of specific tests done by the doctor (MRI, x-ray, ultrasound...).

Registered and analyzed variables:

- Pathology:** Medical diagnoses
- Gender**
- Condition of the lesion:** Acute or chronic (age).
- Number of sessions:** n
- Evolution according to the scale:** good, medium, null.

CONCLUSIONS

- Efficient and safe technique in the rehabilitation treatment of musculoskeletal injuries** of sports trainers: it decreases pain, increases functional mobility and reduces the recovering time.
- It reaches a **total satisfying efficiency in the 73,3% of patients: 85,7 % in acute lesions and 47,0% in chronic ones.** The chronic condition means a **worst prognostic in recuperation.**
- The **number of sessions per patients is reduced** when comparing them with the normally needed and the published in clinical studies. There is a **significant correlation** between **number of sessions** and **registered efficiency.**
- Gender does not change** the prognosis of evolution in acute injuries but it does in the chronic ones.
- Regarding pathologies, the ranking of higher to lower efficiency is established like: **Muscular > Bones and Joints > Ligaments.**
- New controls and comparative studies** should be done in order to increase the obtained results of this technique in the area of high competition sports.