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## TREATMENT OF THE RHEUMATIC ILLNESSES AND ALL TYPE OF AFFECTIONS OSTEOMUSCULARES FOR THERMOPERCUSSION

One of each four people in Spain suffers some type of rheumatic illness, as it reveals a study realized socialsanitary on this type of affections. This study on the rheumatic illnesses in Spain has been carried out by the cabinet Pfizer of Human resources, in collaboration with the Spanish Society of Rheumatology and Spanish Rheumatological Ties.

The social demand that the rheumatic sick persons generate, only rises to 35% in the consultations of General Medicine.

The rheumatic illnesses affect more to the women than to the men. The artrosis and the arthritis are the most frequent in the women, while Jan the men highlight the cervical pain, the lumbago and the drop. The factors that influence in the state of the illness are, in more grade, the cold, followed by the changes of time, humidity, station changes, the efforts, emotional tension.

According to the same study the rheumatic illnesses are of social type, since they affect to people's very high spectrum, and it has very important personal, psychic and economic implications.

The medicine and the treatment of the rheumatic illnesses

It is evident that the medical science uses big human and economic means in search of medications able to try with success the most extended illnesses and with more social cost, like they are the rheumatic illnesses. Big advances have been gotten, especially in the therapy antidolorosa and anti-inflammatory. It has not unfortunately still been possible to develop a healing process, able to eradicate this type of illnesses. Known it is that to develop and with effectiveness to apply a therapy, it is indispensable the knowledge of the causes or of the constituents that originate or they produce some illness type, and that in the case of the rheumatic illnesses these constituents are ignored. While the science looks for solutions to treat this problem, the medical ones try to alleviate the goods of the illness, especially the pain.

## CELLULAR REGENERATION STIMULATIVE

One of the well-known considerations, is the capacity of the human body so that, through their own mechanisms, defend of the illnesses; but in the case of the little rheumatic illnesses or he swims ago in this sense. For this reason and for lack of the effective therapy to cure them, these illnesses settle down and they advance taking to the sick persons to the chronic, painful inability and immobile unpunishedly. When a wound takes place, for example a small court in a finger, the fabric is injured and consequently the multitude of cells that they compose it. It is then when the human organism puts into operation the mechanisms that it prepares, to regenerate, that is to say, to substitute the cells injured by other healthy ones that gradually drive to the cure of the lesion.

He means you that the human organism is regenerated, and for it is necessary that the lesion takes place. Of the previously exposed thing you concludes that the human organism through its own mechanisms regenerates the artificially injured fabric.

The rheumatic illnesses deteriorate, that is to say, they produce lesions of the fabric affected by the same ones progressively. These lesions originated by the rheumatic illnesses are not regenerated by the human organism, we Have then, two types of lesions: some produced ones artificially to those that the own organism regenerates, and other produced ones for the rheumatic illness to those that the human organism doesn't regenerate.

If in consequence, in the fabric affected by the rheumatic illness we produce artificially slight lesions (stimuli), this will also be regenerated, that is to say that him sick fabric, injured artificially, it will be substituted for other healthy.

## THERMOPERCUTOR BPR 250

To produce the artificial lesions in the parts of the human organism affected by the rheumatic illness, the Thermopercutor BPR has been created 250, apparatus of advanced technology that develops the deep thermotherapy and the percussiotherapy simultaneously.

With the deep heating in the sick fabric takes place, in the first place, an important decrease of the cellular edema, bound phenomenon to a normalization of the potential electric transmembranar and later on to a recovery of the enzymatic kinetics and of the reparative phenomena, without caring the type of the cell. The resulting effect of the decrease of the edema, liberates the vascular lights allowing a turn to the normalization of the cell that, when being partly bound to the pain and the anti-inflammatory processes and of compression, it produces an analgesic effect. In the fabric treaty it takes place to glassdilation and a considerable increase of the sanguine watering, indispensable in all regenerative process.

The application of the percussio causes a muscular relaxation originating a series of artificial lesions that they injure the sick cells and they stimulate the regeneration of a new fabric of healthy cells in the previously treated areas.

The therapy for Thermopercussion will always be applied under the control of a sanitary specialist. The Thermopercutors BPR 250 should settle sanitarily in enclosures authorized.

The patient should be correctly diagnosed with special attention to the possible contraindications.

Before beginning the treatment, to the patient he will be explained in a comprehensible way it consists the therapy for Thermopercussion on what and which they are the results that they are sought to get. The patient's subjective valuation on the results of the treatment, one will have before in consideration, during and after the treatment. Keeping in mind the patient's subjective valuation and the objective valuation of the clinic, the duration of the treatment will be determined as well as the grade of cure of the treated parts.

### SUBJECTIVE VALUATION OF THE PATIENT

**The state of spirit of the patient generally varies after each session.** The patient, in the first sessions of the treatment, it can improve or to worsen as first reaction to the treatment. The improvement or initial worsening of the patients will depend on diverse factors, as its physical constitution, chronicity of the illness, age and state of spirit.

It is frequent that the pain diminishes or disappear after the first treatment. With the decrease of the pain he recovers the mobility of the treated articulations partly.

With the decrease of the pain and improvement of the movements, the patient reduces the taking of medications that habitually consumed.

After the first treatment most of the patients sleep better.

In some patients, after the first sessions nuisances, stiffness that disappear later on appear.

### OBJECTIVE VALUATION OF THE SPECIALIST

The specialist diagnoses the location and the grade of evolution of the illness correctly.

Most of the sick persons have x-rays and of analytic tests that the specialist will have in consideration.

The specialist, to their approach, he can request new x-rays or other tests that it considers necessary.

The inflammation grade is measured.

Should the need arise the treatment you can supplement with anti-inflammatory. Equally the grade of the mobility of the affected articulations is valued, as well as the patient's general recovery.

It will be valued the day mobility and the effective decrease of the medications that the patient habitually consumes.

The valuation of all the parameters, will determine the duration of the treatment in days.

### APPLICATION OF THE THERMOPERCUTOR BPR 250

Once diagnosed, the patient will be explained that with the therapy for Themopercussion, they will originate in the sick areas some tissular microlessions that later will be regenerated, that that gradually will drive to the decrease or eradication of the illness. The patient can put a hand in the area of the treatment to perceive the unoffensivity of the Thermopercussion. At the beginning of the treatment the dose will be regulated low. During the treatment the patient should move lightly to avoid the concentration of heat in a single area, to avoid possible burns. The patient should be aware that not to tolerate more the intensity of the treatment will be treated before, but rather it should follow the specialist's instructions. The painful areas will be peripherally, approaching gradually to the causing focus

of the pain, with arrangement to the patient's sensibility. It is not necessary that the patient undresses the areas to try.

In the course of the treatment or of the treatments, the patient will be habituated to the apparatus, for what will be able to increase the dose. It should take special caution with the not very sensitive to heat patients.

The treatment with the percussion regulated to the minimum and you will increase with arrangement to the sensibility and adaptation of the patient.

In the course of the first sessions stiffness like reaction can appear from the organism to the treatment that passed some days they disappear and they don't generally take place again.

With the decrease of the pain and the recovery of the mobility, the patient should carry out physical exercises indicated by the specialist.

## OBSERVATIONS

The glassdilation and the increase of the sanguine watering in the treated areas, cause the affluence of more regenerative substances, with that which the specialist, to her approach can support with an appropriate complement of minerals and vitamins. A contribution of calcium, for example, accelerates the disappearance of the osteoporosis.

It is recommended that during the treatment, especially in the months of more dehydration risk, the sick persons drink water. Should the need arise, the water can be sugared to restore a possible energy loss of the muscles.

Equally, the specialist can recommend the consumption of some vitamins, to restore those that could be affected by the thermotherapy.

## SUSCEPTIBLE ILLNESSES TO THE TREATMENT WITH THERMOPERCUSSION

Illnesses of the apparatus locomotive

Inflammatory Artropatías:

Rheumatoid arthritis

Espondilits anquilopoyética

Degenerative Artropatías:

Osteocondrosis

Diverse Transtornos of the spine.

Rheumatism extraarticular:

Rheumatic Polimialgia

Syndromes dial them

Ciatalgias

Lumbalgias

Other alterations:

Miositis

Tendomiositis

Osteoporitis

Thraumatology and sport medicine

Bruise

Distort

Sprains

Contracturas

Muscular lacerations

## PREPARATION OF THE OPERATIVE EQUIPO/PEOPLE

In the address of the percussion, it is formed during the operation a high-frequency field that can reheat metallic objects or to interfere electronic objects.

People that are in this area will come off of metallic objects, electronic apparatuses of control, wireless telephones, headsets, clocks, jewels, etc., in a preventive way.

Computer teams, radioreceptors, intercoms, phone facilities, etc., they will be shielded in the event of interferences. In certain cases the modification of the sense of the irradiation will be able to produce the wanted effect.

With the purpose of avoiding the interferences, two teams of Thermopercussion won't work BPR 250 in the same enclosure neither in adjacent enclosures, if the irradiation addresses oppose you. The team of Thermopercussion BPR 250 get ready even the disconnected treatment.

They will only be used the accessories and original pieces. The treatment with other accessories or pieces of the Thermopercutor BPR 250 damaged or in not well state can be dangerous.

The seats and utilized stretchers for the treatment won't owe metal being, or in any event not to contain metallic parts in the address of the microwaves to avoid their heating and possible burns. Seats or recovered stretchers of synthetic materials of cloth or plastic are recommended.

## PREPARATION OF THE PATIENT

Before beginning the treatment, the patient should be correctly diagnosed by a specialist.

It is necessary that the patient comes off of dresses with metallic closings, as well as of all the metallic objects or with metallic content that they are in the area of the irradiation field.

The contents of the pockets (keys, currencies), jewels, slopes, chains, clocks and prothesis of metallic content can warm in the field of the microwaves and to produce burns. The electronic apparatuses (pacemakers, headsets, wireless telephones, digital clocks, etc.) they can be damaged inside the field of irradiation of the microwaves. In this high-frequency field they warm the garments more intensely of dressing humid, what has to be kept in mind in the cases of treatment in areas of high perspiration. For this reason, it will be necessary to undress the subjected corporal parts to the treatment.

The dry bandages can be irradiated without limitation. In areas covered with humid or adhesive bandage, you should apply the treatment of Thermopercussion with less intensity of heat.

The parts of the body with metallic endoprothesis, like they can be, the nails modulars, metallic articulations, fasteners, cranial badges, fill metallic, you crown dental, bridges or similar elements with metallic chips or with implanted hairsprings, they won't be treated with the Thermopercutor BPR 250.

The eyes and testicles should never be in the field of irradiation of the microwaves.

During the treatment with the Thermopercutor BPR 250, the patient should collaborate indicating if the temperature is too high or on the contrary. The patient should indicate if the percussion produces him pain in which case it is enough to change the treatment area lightly. The patient's subjective valuation should keep in mind during the whole treatment. Special cautions should take with the not very sensitive to heat patients, since burns could take place.

## DOSAGE

If the treatment norms are fulfilled the Thermopercutor BPR 250, lesions won't appear, because in the treated area the blood stream is activated intensely, being avoided in such a way the concentration of heat. Lesions can only take place in the event of accuses lata during the treatment

The treatment should not be carried out schematically, but individually. The perception of the treatment for the Thermopercutor BPR 250 are stabilized lapsed 5 minutes.

The adaptation of the patients takes place in the course of the treatments.

In any case a decrease of the sensation thermal debit side to induce to the increase of the dosage.

Before the beginning, it is advisable to explain to the patient on what it consists the treatment. The patient can put a hand in l area of the treatment to perceive the unoffensivity of the Thermopercutor BPR 250.

Always the application of the Thermopercutor BPR will be avoided 250 in area of anesthesia local to avoid possible burns.

## CONTRAINDICATIONS

Absolute contraindications

Patient with pacemakers and implanted cochlea

Metallic **Endoprótesis** in the treatment area.

Wicked tumors

An increase of temperature can accelerate the growth of the cells of the tumor or of metastasis. They will should for this reason, to be responsible for the treatment of these patients, the specialists with specific knowledge on tumors.

Active tuberculosis or other specific active illnesses.

Patient with advanced varixes.

The application of the Thermopercutor BPR 250 with dose of minimum heat or without the heat, it doesn't have contraindications. The objective of the treatment with the Thermopercutor BPR 250 are to take place in the parts sick microlesions to stimulate that the injured celular is regenerated.

It is recommended to be careful in the event of:

Sharp infectious illnesses, especially with high fever.

Sharp infectious processes in the bones and articulations. The heat could produce a necrosis in you fabrics treaties or to favor it.

The risk of concentration of heat is bigger in the areas of faulty circulation due to the smallest thermal dissipation. In patient with isquemia presence or of strong lesions in the fabrics, the treatment should be dosed with end care.

Traumas and vascular lesions should not be treated during the first ones 24 at 36 hours after laa lesion, in order to avoid hemorrhages.

Interferences in the patient's thermal sensibility.

In anesthetized areas.

During the menstruation, in hypogastric area.

Patient with uterine pessaries.

In the event of very advanced **osteoporosis**, to avoid fractures.

In the event of tendency to hemorrhages and use of anticoagulants.

Propensity to the thrombosis.

It is convenient not to treat the epífisis disks in children until concluding the growth.

In the application of the treatment in the proximities of the eyes will be used protection glasses.

In the case of treatment in the cranial area, they will retire the contact lenses.

Treatment in the area of the apparatus reproductive male/female, since reproductive organs are extremely sensitive to heat, special measures of caution will apply in the face of the risk of a permanent lesion or of the sterility.

#### SPECIAL GROUPS OF PATIENT

**For the treatment of small children it is advisable to undress them.** Their reduced corporal volume demands a careful dosage and the repeated verification of the cutaneous temperature by means of application of the hand.

The small children as well as the sensitive patients, especially those of advanced age, during the sessions should be specially watched over.

#### OBSERVATIONS

This relationship doesn't seek to be complete. Each team goes accompanied by a treatment chart that indicates the recommended dose as well as the quantity of sessions.

Before beginning the treatment, the specialist should emit the correct diagnosis. To discard the specific illnesses for danger of supuración of the fabric. In a principle, he/she seeks advice to give the patient an antiflogístico.

Not to try with the Thermopercutor BPR 250 of 24 at 36 hours after traumas or vascular lesions, for danger of hemorrhages.

To treat the processes very developed low medication protection (antibiotics, sulfamides), especially if he has to have an infectious in the area to try.

According to the process of the illness and of the adaptation of the patient to the Thermopercutor BPR 250, he seeks advice to increase the percussion force so that microlesions can take place in the deep parts of the treated area, with object dee that they are regenerated.

#### CHART OF TREATMENT FOR TERMOPERCUTOR BPR 250

The suitable securities are orientatives, valid for the treatment of the affected part as well as of a wide area of the periphery of the region or articulation that she undergoes the treatment. It is made well it is

moving the bolster of the Thermopercutor automatically or varying the patient's position. The interval of the treatment is daily in all these indications.

INDICATION	PERCUSSION	IT POTENTIAL IZES WAT	TIME MIN	I NUMBER SESSIONS
<b>ARTROSIS</b> (not sharp, specific)	Minimum	100-150	60	10-20-30-40
<b>ARTROPATIAS</b> sharp	Minimum	150-200	45-60	30-40
chronicle	Minimum	150-240	30-60	20-30
functional	Minimum	150-200	45-60	40-45
(symptoms muscular concominantes, irritation of periostio insert and tendon)	Minimum	150-200	45-60	15-20
<b>ARTROSIS DEFORMANTE</b> Small articulations (Nodules of Heberden) Medium articulations (p.e. rod = gonartrosis) Big articulations (p.e. coxartrosis)	Minimum	100-180	45-60	20-30
	Maxim	160-240	30-60	30-50
<b>CERVICAL BRAQUIALGIA</b>	Minimum	100-200	45-60	10-15
<b>BURSITIS</b>	Minimum	100-150	45-60	10-15
<b>CRAMP OF CALF</b>	Minimum	140-240	30-45	According to neces.
<b>SCIATICA, Sharp</b>	Minimum	120-160	45-60	15-20
Chronicle	Minimum	160-200	30-60	20-30
<b>BRUISE</b>	Minimum	100-140	45	5-10
<b>COXARTROSIS</b>	Minimum	140-240	30-60	35-40
<b>COXIGODINIA</b>	Minimum	100-200	40-60	25-30
<b>COXITIS (non-specific)</b>	Minimum	100-200	45	15-25
Static <b>DIFFUSION</b> of the locomotive apparatus	Minimum	120-240	45	25-30
<b>DISTORT</b>	Minimum	100-140	45	5-10
<b>SPONDYLOSIS</b>	Minimum	160-240	45-60	20-25
Traumatic residual States (after desmorrexia, distortions, hematomas, bruises, luxations, etc. )	Minimum	100-140	45	15-20
<b>ESTILOIDITIS</b>	Minimum	100-140	35	5-10
Extension of the spine, of support	Minimum	140-200	45-60	20-30
<b>HIDROPSIA</b> (p.e. rod, and other articulacio. )	Minimum	100-140	15-20	5-10
<b>LUMBAGO, sharp LUMBALGIA</b>	Minimum	100-200	45-60	5-10
chronicle	Minimum	160-240	45-60	20-25
<b>MENISCOPATIA</b>	Minimum	100-160	45	20-30
General Mialgias (Miositis)	Minimum	80-200	30-60	5-10
<b>MIOGELOSIS</b>	Minimum	100-200	30-45	5-10
<b>MIOPASMA</b> (contracturas, cramps, etc.)	Minimum	140-240	30-45	According to neces.
<b>MIOSITIS</b> (real inflammation)	Minimum	80-160	45	5-10
<b>OSTEOCONDROITIS</b> (lumbar, cervical)	Minimum	120-240	60	10-20
Contracturas paracervicales	Minimum	120-240	45	5-10
Periartritis chronic escapulo humeral	Minimum	160-240	45-60	10-20
<b>PERIOSTITIS</b>	Minimum	140-150	30-45	10-15
Syndrome of the cartilage intervertebral (without manifestation for rays sharp prolapse for recolocación, relaxation of the	Minimum	140-200	45-60	20-25

contractura, sciatic nuisances, radiculitis, parestesias)				
CERVICAL SYNDROME	Minimum	140-200	45-60	10-15
CHRONIC LUMBAR SYNDROME	Minimum	140-240	45-60	20-25
CHRONIC THORACIC SYNDROME	Minimum	140-240	15	10-15
TENDINITIS	Minimum	140-200	15-20	5-10
TORTICOLLIS	Minimum	160-200	45	4-5
EPICONDILITIS	Minimum	100-180	15-30	5-10
ESPONDILOARTROSIS DEFORMANTE	Minimum	160-240	45-60	20-40
RHEUMATIC POLIARTRITIS	Minimum	140-240	45-60	30-40
Sharp MUSCULAR RHEUMATISM	Minimum	100-140	35-60	15-20
chronic	Minimum	140-240	30-60	30-40

## I ANNEX 1°

Under the title “Cellular Micropercussion-stimulative regeneration”, the doctors Teresa Viñuela Lobo and Luis Hernández Herrero, directed by the professor Marcos of Antonio, they have elaborated a study in the School of Medicine of the Work, clerk of the Ability of Medicine in the University Of Alcalá de Henares of Madrid, to expose the results obtained in the application of the therapy by Cellular Regeneration Stimulative, Termopercusión, in the rheumatic illnesses, as well as their incidence in the labor and sport medicine.

In the preamble of the one mentioned study, their authors say textually:

“We expose our gratefulness to all those that have lent their help in the realization of this work, especially to the professor Marcos of Antonio, to Enrique Fernández, Salvador Ruiz and to the Center Konjevic of Madrid, of Thermopercussion.

Indeed, the Dr. Hernández has directed during two years this Center of Thermopercussion, where has developed important works that have served him as source of data, necessary to carry out a study in which is deepened in the knowledge of the obtained results and that they are summarized next.

It's considered that third two parts of the rheumatic pathology originate in the spine. So far the treatment of these illnesses is based on three fundamental pillars:

1°.- The medicaments anti-inflammatory non esteroideos (AINES) and/or other analgesic ones.

2°.- The physical therapies:

Passive and active mobilization

Theromtherapy (it paraffins, infarajos, microwaves, short wave, laser, etc. )

Ultrasounds

### **Magnetoterapia**

Cervical tractions and lumbar

3°.- The surgery to correct the deviations, **protusiones or hernias**, almost always as last resource.

In spite of everything this therapeutic arsenal (and other therapies that don't make an appointment), many of these pathologies evolve bad, you cronifican and they leave making more severe.

The encouraging results reflected in the study encourage their authors to think that an important step is giving in the fight against the rheumatic illnesses.

As objective of their studies the doctors Viñuela and Hernández think about the valuation of the effectiveness of the therapy for Cellular Regeneration Stimulative, Thermopercussion, applied in the workers affected by rheumatism in the spine and in the affections of the soft parts.

In the development and application of this therapy is used the Termopercutor BPR 250.

The treatment is applied in the area affected by the rheumatic illness, especially in the near muscles to the aching area. The treatment should not produce pain, neither during neither after the application of the therapy.

## APPROACHES OF SELECTION OF PATIENT

The following ones have been used:

age: 16 to 69 years

sex: shadowy

labor situation: in active

treated pathology: spine rheumatism

rheumatism of lumbar column

rheumatism of soft parts

minimum number of received sessions:

\* 15 in the cases of artrosis

\* 10 in the event of pathology of soft parts to exception of those patients that, with an inferior number of sessions to the established one, they have been given of high with a subjective improvement and valuation from the superior doctor to 5 on 10.

to have the history and included exploration complete clinics the interrogation and exploration the moment of the high one.

## BASE OF DATA

The initial support of the data has been the clinical history of the Center of Thermopercussion, very exhaustive and prepared to carry out a simple pursuit of all the parameters that they define qualitative and quantitatively the suffering, especially those of functional character.

Once selected the histories that completed all the selection approaches, you proceeded to extract 60 data of each history.

The data that have been studied are:

Data of identification of the patient:

History number

Age: 16 to 69 years

Sex: male or woman

Profession

Data on the patient's illness:

Code of diagnostic: according to the international classification of illnesses of the OMS.

Severity. Valued of 1 at 4, following radiological approaches in the case of artrosis and clinical in that of rheumatism in soft parts, being:

Light

Moderate

Severe

Very severe

Time of evolution of the current illness valued in months or in fractions of months. They are considered the following categories:

\* time of evolution < 1 month: sharp

\* time of evolution 1-3 months: subaguda

\* time of evolution > 3 months: chronicle

Data on the applied treatment:

- frequency of the sessions of bigger to smaller:

\* 2 daily

\* 1 daily

\* 1 alternating

\* 2 weekly

total number of sessions that the patient has received.

Duration of each session in minutes.

It forces of the percussion: it registers in semiquantitative way, numbering from 0 to 11, when not having any apparatus able to measure this percussion force, as simple reference one can say that:

Percussion 0 = slack

Percussion 4 = moderate

Percussion 7 = strong

Percussion 11 = very strong

secondary actions: it registers the appearance of secondary actions, probably due to the applied treatment as pain to the percussion, **hematomas**, burns, fatigue, "stiffness" or return of the pain. It is valued from 1 to 5 the severity of this secondary actions:

1 = light

2 = moderate

3 = intense

4 = he/she forces to suspend the treatment temporarily

5 = he/she forces to suspend it definitively

associate treatment: in the event of associating other treatments it's reflected in this section.

Duration of the applied treatment: in months or fractions of months.

Valuation of the goods of the treatment about the illness and the patient's labor capacity.

d.1 Data that were valued to the beginning of the treatment, at the end of the same one and, whenever it was possible, in a control several months after the high one.

Labor situation:

\* asset

\* transitory labor inability

\* permanent disability (total or absolute)

Medication: the quantity of analgesic and/or anti-inflammatory medication was valued administered to the patient. For it was used it a chart made in this respect, starting from the analgesic power of this medications, (chart 1).

Other helping medicines: they are reflected the medicaments ingested to treat symptoms related with their illness here, such as **antivertiginosos**, **antijaquecosos** "of base" and muscle relaxants, giving a point for each unit of up-to-date ingested classification.

Valuation of the improvement according to the doctor: the doctor punctuates the form improvement similar to the valuation that makes the patient in the previous section, but keeping in mind all the data of the history and physical exploration.

#### CHART 1

It potentializes analgesic of the medications used by the patients included in the study. It took as unit 100mg of aspirin I similar to 1.

NAME GENERIC TRADE NAME DOSE (mg) POINTS

Sour salicylic acetyl AAS, Adiro, Rhonal 500 5

Codeine phosphate Codeisán 30 6

Lysine Clonixianato Dolagial 125 5

Diclofenac Voltaren, Dolotren 50 20

Droxicam Drogelón 20 10

Flubirprofen Frobén 50 10

Ibuprofen Neobrufen 400 20

Indometacina Inacid 25 10

d.2 Data that have been registered exclusively to the beginning and the end of the treatment:

- Activities of the daily life (AVD): valuation of the patient's capacity to take a "daily life" normal. 9 parameters are punctuated from 0 to 3, being 0 the total inability to carry out the activity, and 3 the realization of the same one without difficulty (chart 2). Added the results of the nine parameters have a punctuation global that goes from 0 to 27, being

0-4 = great disability

5-10 = severe discapacidad

11-16 = moderate discapacidad

17-22 = light discapacidad

23-27 = normal or almost normal

pain: the intensity of the pain is valued from 0 to 5, only registering the most intense pain that exists (for example: it hurts a lot in rest and little to the movement, he will register as intense pain). It is classified this way:

0 = pain absence

0.5 = nuisances

1 = light pain

2 = moderate pain

3 = intense pain

4 = very intense pain (indispensable to take analgesic)

5 = unbearable pain

mobility: the mobility is valued by so many percent of functional limitation. If the movement accompanies of pain, it is considered bigger functional limitation if the pain that causes this movement is bigger.

0% = there is not limitation

20% = light limitation

40% = moderate limitation

60% = severe limitation

80% = very severe limitation

100% = total limitation

## CHART 2

Valuation of the activities of the daily life:

To get dressed:

Difficulty to put on and/or to take off the clothes.

To get up:

Grade of difficulty to get up from the seats, armchairs, bed.

To eat:

Difficulty to manage the cutlery, the glass of water.

To walk:

Difficulty to move on foot. If he needs cane and/or a person to their side, he understands each other that he walks with help and it punctuates 1.

Hygiene:

Difficulty to enter and to leave the bathtub, to take a shower and to comb you, to shave.

Autonomy:

Capacity to ascend and to lower stairways, to the meter, bus or car, keeping in mind the means of habitual transport of the patient.

Compressive stress:

Subjective valuation of their own force in the hands

Activity:

Capacity to carry out their labor activity. If the worker is of drop it punctuates 0, if it continues working but with a lot of difficulty 1, etc.

Social integration:

It tries to reflect the patient's capacity to be related with their environment in relation to their own desires and integration necessities.

Individual valuation of each parameter

0 = total inability

1 = precise help or he/she has great difficulty

2 = he/she carries out activity with little or moderate difficulty

3 = normal capacity.

This way the flexion and lumbar and cervical extension, the lumbar lateral flexion and the cervical turn are valued. In these last two cases, it only registers the most affected side for the functional limitation. Lastly a field has been developed by heart in each record, where some data of interest can be added, In this field we have introduced the **radiculalgia** syndromes and syndromes cephalic **cérvico** in the case of existing some of these. Here they have registered data it has more than enough sickness, **acúfenos**, **parestias**, migraines, reflections (**rotulianos, aquíleos,....**), lassegue, etc., also valuing their intensity from 0 to 3.

## PATIENT

It was studied 80 people, 34 of those which suffered of problems of the lumbar column, 28 of cervical and 18 of soft parts. In the charts 3, 4 and 5 summary the data definitorios of this patients.

It is of highlighting that more than half of the patients treaties (55%) they have been diagnosed of **espodiloartrosis** like main suffering. On the other hand, the reason of sexes (0.56) it is clearly favorable to the woman. These data belong together quite well with those of **prevalencia** in the general population. He also calls the attention the severity (he mediates 2.65) and the great chronicity (he mediates 7 years and 4 months of evolution) of the treated illnesses, although in this last fact there is a lot of dispersion, from sharp lesions to other much more chronic.

## APPLIED TREATMENT

All the patients received physiotherapeutic treatment exclusively with Thermopercussion, although it was recommended to make slight exercises once they went noticing improvement. As treatment associate medicaments there were two patients to those that were applied Rumalón, other two (of sciatica) they received complex B and a last one (with **osteoporosis**) carbocalcitonina. In total 5 patients (5.2% of the total). In the charts 6, 7 and 8 are detailed the data it has more than enough application of the Thermopercussion. On the average they were 17 sessions of 26 minutes of duration, with daily rhythm (of Monday to Friday) in the great majority of the patients treaties, (86.2%).

There were not secondary actions practically. Four patients referred light pain to the percussion, two complained of "fatigue" in the treated area, one had discreet return of the pain at the beginning of the treatment and a last one a small **hematoma**. In total 8 people (10%) that had to discontinue the treatment in any case. For illnesses, five of these patients corresponded to rheumatisms of the soft parts, two to lumbar and one to cervical.

100% of the patients was evaluated to the high one, while to 46 people (57.5%) a later control could be made to value the medium-term evolution. This control was carried out to the 6,1 months opr average (range 1,5 months to 12 months).

## CHART 3

Profile of the patient with lesion of lumbar column

Age: he/she Mediates 49,21 + - 8.96 (range 30 to 64 years)

Sex: Male 12  
Woman 22 Reason of sexes 0,54

Diagnostic:  
Lumboartrosis 21 cases..... 61,7%  
Sciatica 7 cases..... 20,5%  
Lumbalgia 2 cases..... 5,8%  
Osteoporosis 2 cases..... 5,8%  
Escoliosis 1 case..... 2,9%  
Sacralización L5 1 case..... 2,9%

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Total..... 34 cases

Severity:  
He/she mediates: 2,97 +-1

1 = light 1 case..... 2,9%  
2 = moderate 8 cases..... 23,5%  
3 = severe 16 cases..... 47,0%  
4 = very severe 9 cases..... 26,4%

Chronicity:  
Time of evolution of the illness  
It mediates 10,54 +- 9,8 years  
Range 9 days to 39 years

I square sharp: 3 cases..... 8,82%  
I square subagudos: 3 cases..... 8,82%  
I square chronic: 28 cases..... 82,36%

#### CHART 4

Profile of the patient with lesion of cervical column.

Age: he/she Mediates 48,32 +- 8,44 (range of 30 to 64 years).

Sex: Male 9  
Woman 19 reason of sexes 0,47

Diagnostic:  
Cervicoartrosis 25 cases..... 89,2%  
Cervicalgia simple 1 case..... 3,5%  
Syndrome cervicocefálico 1 case..... 3,5%  
Syndrome cervicobraquial 1 case..... 3,5%

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Total..... 28 cases

Severity:  
He/she mediates 2,25 +- 1

1 = light 7 cases..... 25,0%  
2 = moderate 11 cases..... 39,2%  
3 = severe 6 cases..... 21,4%  
4 = very severe 4 cases..... 14,2%

Chronicity:  
Time of evolution of the illness  
It mediates: 7,5 +- 6,9 years  
Range: 7 days to 21 years

I square sharp: 3 cases..... 10,7%  
 I square subagudos: 1 case..... 3,6%  
 I square chronic: 24 cases..... 85,7%

CHART 5

Profile of the patient with lesion in soft parts.

Age: he/she Mediates of 36,1 years (range of 16 to 70 years)

Sex: Male 8 cases  
 Age madia: 35,2 years  
 Range: 16-66 years  
 Woman 10 cases  
 Half age: 36,9 years  
 Range: 18-70 years

Diagnostic:

Sprain of external lateral ligament of the ankle:  
 5 cases..... 27,7%  
 Sprain of other localizations:  
 3 cases..... 16,6%  
 Contractura of different localizations  
 5 cases..... 27,7%  
 Tendinitis, epicondilitis, fascitis  
 5 cases..... 27,7%

Severity:

It mediates 2,6

Light: 0 cases..... 0,0%  
 Moderate: 7 cases..... 38,8%  
 Severe: 10 cases..... 55,5%  
 Very severe: 1 case..... 5,5%

Chronicity:

Time of evolution of the lesion:

He/she mediates: 12,3 months  
 Range: 10 days to 8 years

Injure sharp: 4 cases..... 22,2%  
 Injure subagudas: 1 case..... 5,6%  
 Injure chronic: 13 cases..... 72,2%

Previous treatments:

16 cases (88,8%):  
 Null results = 8 cases..... 50,0%  
 Not very satisfactory results = 8 cases..... 50,0%

Chart 6. Treatment applied in patient with problems of lumbar column.

PROBLEM	N° of cases	Severity	Months of evolution	Age	Reason of sexes	N° of sessions	Duration Minimum minutes	It potentializes	Percussion
LUMBOARTROSIS	21	2,7	200	51,2	0,4	20	26,4	150	5
SCIATICA	7	3,5	13,6	46,8	0,75	16,5	28,4	140	4
LUMBALGIA	2	3	10	38,5	2V	11,5	30	160	3
OSTEOPOROSIS	2	3	142	57	2M	25,5	23	120	4,5
ESCOLIOSIS	1	4	468	46	1M	15	51	150	1
SACRALIZACION L5	1	3	10	31	1V	21	30	140	4
TOTAL	34	2,9+-1	126,5+-117,7	49,2+-8,7	0,54	19+-6	28+-9	146+-28	4,6+-1,3

Chart 7. Treatment applied in patient with problems of cervical column

PROBLEM	N° of cases	Severity	Months of evolution	age	Reason of sexes	N° of sessions	Duration Minimum minutes	It potentializes	Percussion
CERVICOARTROSIS	25	2,2	94,7	54,1	0,38	17	25	120	0,7
CERVICALGIA SIMPLE	1	2	0,60	30	1V	7	29	140	5
SYNDROME CERVICOCEFALICO	1	4	102	40	1V	9	24	160	4
SYNDROME CERVICOBRAQUIAL	1	2	60	60	1M	20	15	100	2
TOTAL	28	2,2	90,4+-82,7	48,3+-8,4	0,47	17+-6	25+-9	130+-20	1+-1,5

Chart 8. Treatment applied in rheumatisms of soft parts.

PROBLEM	N° of cases	Age	Severity	Months of evolution	N° of sessions	Duration minimum minutes	It potentializes	Percussion
SPRAIN OF ANKLE	5	23,0	2,4	11,2	8,4	24	104	2

SPRAIN OF ANOTHER LOCALIZATION	3	42,6	2,7	3	9	30	130	5,5
CONTRACTURA	5	37	2,6	2,6	3,6	23	150	6,5
TENDINITIS	5	43,8	3	8,5	19,8	17	100	2,5
TOTAL	18	36,1	2,6	6,7	11,3	22	120	4

## RESULTS

In the charts 9, 10 and 11 (TO, B and C) summary the obtained results. In general these they have been good. In what refers to the pain, this has passed of intense to light, or even to disappear in many cases. This has a reflection, logically, in the quantity of analgesic medication that they take before and after the treatment, as well as the later control. This way, before the treatment the column patients took the equivalent one to two daily aspirins (10 points), passing at the end of the treatment to take, the patients of lumbar stocking “aspirin-equivalent” and those of cervical any analgesic medication. These figures stay almost unalterable in the later control to the high one in several months.

The functional deficit of the affected articulations, is moderate before the treatment and nonexistent become after the same one, allowing a practically normal and painless mobilization in the axes of the evaluated movement.

Other symptoms like they are the **paresias, parestesias and hipostésias** of MMSS or MMIL, **hiporreflexia**, sign of Lassegüe and pain irradiated with characteristic **raquineurálgicas** pass of being severe to nonexistent practically. The same thing happens with the dependent symptoms of the cervico-cephalic syndrome: sickness, **acúfenos**, migraines... This explains, for example that, after the treatment with Thermopercussion, decrease from 4 to 1 the number of medicaments consumers against the sickness.

The great improvement in the parameters mentioned up to now is also appreciated in the activities of the daily life (AVD). It is observed how the problems of the lumbar column, the most chronic and severe, are also those that more improves in absolute terms (almost 5 points in front of 2,5 in cervical) staying, nevertheless, to 0,7 points of these that almost reach the maximum value (26,6 on 27).

The AVD that, logically, she has more value from the point of view of the medicine of the work, in the labor activity. On the whole, before applying the therapy there was a moderate-severe difficulty to carry out the professional tasks, which passed after the therapy to be nonexistent in him case of cervical rheumatism and the soft parts, and to discreet-moderate difficulty in the one of lumbar.

Before the treatment, there were 17 people of low labor, that is to say, 21,2%; 9 of lumbar, 26,6%; 5 of soft parts, 27,7% and 3 of cervical, 10,7%. At the end of the therapy it was not any worker of low. In the later control, two of the 46 revised patients were again of low (4,3%), one of **cervicoartrosis** and one of **lumboartrosis**.

Lastly, the fact that summarizes the obtained results, is the valuation of the improvement for the patient and for the doctor. The patient values her improvement to the high one in a 8,2 for 10 (I average), with quite homogeneous, cervical partial results = 8,7, you leave soft = 8.6 and lumbar = 7,8. The results of the doctor's valuation are superimposed practically on those of the patient's valuation. In the valuation that the patient makes in the “later control”, the global improvement stays (8,2), but to coast of a discreet increase of the punctuation in soft parts (9,1%) and a decrease of the same one in cervical (8,2%) and lumbar (6,9%).

Only 3 patients (3,7%) they had poor or null answer to the treatment (0 to 3 points), in the 3 cases there was severe **lumboartrosis** and in one of them, also, very severe back-lumbar **escoliosis**. Other two patients (2,5%) also of severe **lumboartrosis**, they only responded regularly (4 to 6 points). The rest (93,7%) they had a good or excellent answer to the treatment (7 to 10 points).

In the "later control", he was proven that evaluated 4 patients of the 16 (8,7%) they had suffered relapse.

Chart 9. Results obtained in lumbar column.

Previous situation to the treatment  
 Situation in the date of the high one  
 Situation in the later control

The data that they appear among parenthesis refer aware percent of improvement,

Problem	N° cases	Medication		Total A.V.D.		Pain		% functional limitation						Medical improvement	Improvement Subjective			Activity			Situation Labor Active%		
		I	II	I	II	I	II	Lateral Flexión	Extension	I	II	I	II		I	II	III	I	II	III	I	II	III
Lumbo - artrosis	21	8	2,5 (68,7)	22	25,7 (16,8)	3,3	0,7 (78)	30	7,5 (75)	18	4,5 (75)	21	4,5 (78)	7,7	7,5	6,7	1,6	2,5	85,7	100	87,5		
Sciatica	7	19,2	1,4 (92,7)	16,4	26,5 (61,5)	3,8	0,3 (92)	40,5	0 (100)	45	0 (100)	45	0 (100)	8,7	8,8	9,5	0,3	2,8	28,5	100	100		
Lumbalgia	2	1	0 (100)	23,5	27 (14,8)	3	0 (100)	37,5	0 (100)	15	0 (100)	15	0 (100)	10	10	10	1,7	1,7	50	100	100		
Osteoporosis	2	32,5	1 (97)	25,5	26 (1,9)	3	0,5 (83)	0	0	0	0	0	0	8	9	9	1,5	1,5	100	100	100		
Escoliosis	1	0	15 (negative)	22,5	22,5 (0)	4	4 (0)	60	60 (0)	60	45 (25)	60	60 (0)	1	0	0	2,5	2,5	100	100	100		
Sacralización L5	1	0	0	25	26,5 (6)	2	0,5 (75)	45	0 (100)	0	0	45	0 (100)	8,5	8,5		2	2,5	100	100	100		
Total	34	11+-19	2,4+-5,4 (88)	21+-4	26+-2 (22)	3,2	1 (69)	35,5	23	11,2	23	8,7		8+-2,4	7,8	6,9	1,4+-0,9	2,6+-0,5	75	100	93		

Chart 10. Results obtained in cervical column.

I) previous Situation to the treatment  
 II) Situation in the date of the high one  
 III) Situation in the later control

The data that they appear among parenthesis refer aware percent of improvement.

Problem	N° cases	Medication		Total A.V.D.		Pain		% functional limitation			Improvement Doctor	Subjective improvement		Activity		Situation Labor active%					
		I	II	I	II	I	II	Flexion	Extension	Turn		I	II	I	II	I	II	III			
Cervicoartrosis	25	7,3	0,6 (92)	24,2	26,8 (10,7)	2,8	0,35 (88,7)	33	7,5 (77)	24	4,5 (82)	19,5	0 (100)	8,6	8,8	8,1	1,6	2,86	88	100	80
Cervicalgia Simple	1	0	0	26	27 (3,8)	2	0 (100)	0	0	15	0 (100)	15	0 (100)	10	10	10	2	3	100	100	100
Síndrome cervicocefálico	1	99	0 (100)	25	27 (8)	4	0,5 (87,5)	60	0 (100)	60	0 (100)	60	0 (100)	8	7	7	2	3	100	100	100
Síndrome cervicobraquial	1	20	0 (100)	18	21 (16,6)	2	0 (100)	0	0	0	0	0	0	7	7	--	2	2,5	100	100	
Total	28	11+-19	2,4+-5 (78)	24+-3	26,6+-1 (10)	2,7	0,26 (90)	17	1 (94)	21	0,5 (98)	19	2,5 (86)	8,6+-0,9	8,7	8,2	1,7	2,8	82	100	93

Chart 11 A. Sprains.

Been for patient.

Abbreviations: V=Varón, M = Woman, l.l.e. = lateral ligament external, Izqdo = Left, Dcho = Right

Age in years

PROBLEM

Age ---	Description	Time of evolution. ---	Repercussions	N° sessions ---	Description	Patient valuation. (in the control)
Sex		Severity		Frequency		
18 M	Sprain previous brunch l.l.e. right ankle. When stepping irregularity of the land while she ran.	10 days Moderate	After moving away functional bandage of sticking plaster (it covers), it continues moderate mechanical pain and limp.	8 Daily	After the therapy they are only slight nuisances that disappeared totally in one month. She practices sky with normality.	10
16 V	Sprain chronic previous brunch l.l.e. right ankle. When falling for stairway.	4 years Severe	Fond footballer. It hurts a lot after the parties and it limps; also when remaining in <b>bipedestación</b> .	9 Daily	Cure. It plays soccer without problems.	10
31 M	Sprain half brunch l.l.e. right ankle. When practicing jogging.	3 months Severe	Unstable ankle. He twists up-to-date, with intense pain, in the face of small irregularities of the floor. He cannot run.	2 Daily	The ankle rarely twists and only when stepping big irregularities of the land. She practices jogging with normality.	8
29 V	Sprain previous and half brunches l.l.e. right ankle. Practicing career.	9 months Moderate	Unstable ankle. You "it loads" when walking.	9 2/ week	Almost total disappearance of their symptomatology.	8
24 M	Sprains of repetition previous brunch l.l.e. right ankle.	8 years Moderate	Unstable ankle. He/she very often twists.	14 Daily	She rarely twists.	9,5
25	Sprain cervical ligaments (C-7), for fall on neck in	1 month	It prevents to play rugby. It doesn't	4	Cure. Several hours after the last session it	10

V	<b>hiperflexión</b> , playing to the rugby.	Severe	improve with the applied treatments. They have indicated him 15 days more than absolute rest.	2/Day	began to train without problems.	
37 V	Sprain of crossed ligament previous of right knee, for kick in external face of knee, playing <b>futbito</b> .	5 months Severe	It prevents to play futbito, to run.... He hurts when walking, to go up stairways in the face of the failure of the multiple therapies, they propose him surgery.	15 Daily	Cure. All the symptoms and signs have disappeared, even the "previous drawer."	10
66 V	Sprain ligament lateral internal left knee.	3 months Moderate	He/she prevents to make jogging. He/she hurts when walking. Multiple treatments fail.	7 Daily	Cure. Disappearance of all the symptoms and signs.	10

Chart 11B. **Contracturas.**

Patient results for patient.

Abbreviations: V = Male, M = Woman, l.l.e. = external lateral ligament, Izdo = Left, Dcho = Right

Age in years

Valuation carried out by the patient, of 0 at 10, in the control realized several months after the high one.

PROBLEM						
Age	Description	Time of evolution	Repercussions	N° sessions	Description	Patient valuation. (In the control)
Sex		Severity		Frequency		
30 V	<b>Contractura</b> of muscles bigger romboides, when practicing motocross.	days Moderate	Pain in region <b>interescapular</b> when mounting in moto.	7 Daily	Cure.	10
39 M	Contractura right internal twin.	days Severe	Pain when walking that becomes intense when going up stairways and when feeling the muscle.	1 --	Cure. After the first and only session, he/she notices a great one hshe ali-saw and in a few days it disappears the symptomatology totally.	10
19 V	<b>Contractura recidivante</b> of left <b>isquiotibiales</b> , had started up quick, playing soccer.	4 months Moderate	It cannot play soccer. Pain to the knee extension and the hip flexion.	5 Daily	Cure.	10
59 V	<b>Contractura isquiotibiales</b> and left <b>cuádriceps</b> , when throwing a córner (soccer).	4 months Severe	Limp when walking more than 200 m. Fatigue. It cannot play soccer.	2 Alternating	Disappearance of almost the whole symptomatology. They are only small nuisances to the "to change the time."	9,5
38 M	Right <b>torticollis</b> of repetition for one year, The last episode already lasts 4 months and there is you returned lately.	4 months Severe	Pain and intense functional impotence, I get dizzy, great difficulty for the work. Diclofenac sup puts on. 100 mg. 1 up-to-date.	3 Alternating	In the date of high sensitive improvement, for what suspended the medication. Not new episodes 13 months later.	10

Chart 11C. **Tendinitis, epicondilitis, fascitis.**

Patient results for patient.

Abbreviations: V = Male, M = Woman, l.l.e. = external lateral ligament, Izqdo = Izquierdo, Dcho = Right.

Age in years.

Valuation carried out by the patient, of 0 at 10, in the control realized several months after the high one.

PROBLEM				Nº sessions	Description	Patient valuation (in the control)
Age	Description	Time of evolution Severity	Repercussions	Frequency		
65 M	<b>Epicondilitis</b> right, for inadequate use of cane.	15 days Moderate	Pain in epicondyle when catching weights	33 Daily	Cure. The treatment was applied simultaneously that of its knee (severe <b>gonartrosis</b> ) The continuous use of the cane reduced the cure.	10
41 M	<b>Epicondilitis</b> severe right associated to light <b>epitrocleitis</b> .	18 months Severe	Pain when catching slight pesos, to twist a cloth, to cut a fillet, to get dressed,..... intense.	13 Daily	It is only pain when catching big pesos. The improvement stays past 5 months.	10
24 M	<b>Tendinitis</b> insert humeral of both bigger pectoral.	10 months Severe Izqdo Light Dcho	Pain when catching slight pesos.	21 Daily	The cured right. In the left one they are small when catching big pesos.	7 Izqdo 10 Dcho
70 M	<b>Tendinitis</b> low portion of the right biceps.	2 months Severe	Intense pain when elevating arm. He/she cannot comb himself. She sleeps bad for the pain. She takes paracetamol, 650mg/day	23 Daily	To the high one, almost complete improvement. In spite of their advanced age. To the 3 months, relapse although without arriving to the situation anteriorl. To the 10 months he/she stays to regulate.	5
19 M	<b>Fascitis</b> to plant bilateral in their insert calcánea, for feet cavos and practice of jump of height and athletics.	1 year Very severe	Intense pain when jumping and very little jump force. 5 months behind they cut him surgically the fascias without result.	9 Daily	To the high one, practically the symptoms and signs have disappeared. They are nuisances when jumping barefoot or after many repetitions. 7 months later he/she stays the improvement.	9

**THE THERMOPERCUSSION IN THE TREATMENT OF THE OSTEOPOROSIS POSTMENOPAUSICA**

Although the **osteoporosis** is a typical illness of the advanced age, we bring it pertinent here po several reasons:

it is the metabolic illness of the most frequent bone, with serious consequences at level of the spine with an immense socioeconomic cost.

The **osteoporosis** is gestated starting from the 35 years (I chop maximum of bony mass) and, besides the feminine menopause, the **sedentarismo**, the faulty feeding and the scarce exhibition in the sun during the

fourth three parts of the year they are factors of risk of this illness. These last three factors are given in multiple professions (clerks, for example), for what the **osteoporosis** can be at least partially of labor origin.

The perspectives of the Thermopercussion in the prevention and treatment of this illness are very good.

## RECORDS

The good apparent results in the radiological controls of patient of artrosis and arthritis, as for improvement of the bony plot, encouraged us to measure this improvement for bony **densitometría**. To a patient that suffered **osteoporosis** and **pinzamiento** severe L5-S1, with strong lumbal pains, it was measured the bony mass before and after a treatment with Thermopercussion. In spite of the clinical improvement (the pain became small nuisance), the density of bony mass continued diminishing to quick rhythm.

## STUDY

In view of the results with alone Thermopercussion, we decide to combine it with elcatonina, proposing the patients a clinical treatment for 10 days a month (except Saturday and Sunday) during 6 months. The study was made on two women of 53 and 62 years. The two patients fulfilled the 10 elcatonina injections completely (40 ui) a month, during six months. The Thermopercussion was only applied the 53 year-old patient in the last 3 cycles, in 8 sessions of 30 minutes for session. The 62 year-old woman was treated by Thermopercussion in 5 of the 6 scheduled cycles, with 10 sessions of 20 minutes for session. In both cases the Thermopercussion was applied with a power of 140 W and four percussión units (moderate). Both an elcatonina several hours they were injected the later Thermopercussion and at the four hours Calcium ingested Sandoz Forte, a tablet.

The results of the **densitometrías** QDR hologic, with six months of interval, is exposed next:

AGE	Previous <b>Densitometría</b>		<b>Densitometría</b> 6 months		GAIN		
	gr / cm2	( * ) %	gr / cm2	( * ) %	gr / cm2	%	% yearly
53	0,717	21,2	0,747	18,6	0,024	3,35	6,7
62	0,625	26,2	0,648	23,5	0,023	3,7	6,9

(\*) Loss regarding the group control of the same race, age and sex.

These results suppose improvements from the next density of mass to 7 annual%, above that waited with alone elcatonina.

## DISCUSSION AND SUMMATIONS

Before the excellent results obtained in all the valued parameters, we can make a very positive valuation of the therapy for Thermopercussion. That is to say, the treatment is very effective to treat the valued illnesses, although most of the same ones showed of severe way and chronicle. It tries with success so much degenerative illnesses (**artrosis**, **osteoporosis**), as inflammatory (**tendinitis**, etc. ). It improves as much the local pain as the one irradiated and the neuralgic one (sciatica, cervico-brachial neuralgia) as well as other symptoms **raquineurálgicos** and **cervicocefálicos**. Also, it elevates the functional capacity of the articulation, ligament, tendon or muscle damaged by the illness, and I eat consequence it improves the capacity for the work. It is able to reduce, and until eliminating the consumption of medications, not only analgesic and anti-inflammatory, but also **antivertiginosos** and probably other more (muscle

relaxants, ansiolíticos,....) avoiding this way possible secondary actions of many of these medicaments and reducing the cost of attention to the patient, since the goods are durable.

All this is only possible with to strike and to heat the sick area smoothly for half daily hour during approximately one month, and with scarce and banal secondary actions.

But how does it get it?, does it really stimulate the cellular regeneration?. We believe that yes, since it is the only way that we are happened of explaining some goods so wide and durable, and in so great variety of pathologies. On the other hand, it is not of missing this effect, since all the fabrics and organs have mechanisms more or less complete of being regenerated incessantly. The cartilage even possesses an astonishing regeneration capacity, starting from the bone subcondral or directly.

The health and the illness are not absolute states, but very dynamic situations in unstable balance, conditioned by pathogen forces and healthy forces that "they throw" toward one or another end. The therapeutic performances can go against the pathogen forces, as the antibiotics they go against the germs. In any stadium of the spectrum health-illness they are been able to and they should stimulate the healthy forces, sew that many times unfortunately it forgets.

In the case of the **artrosis**, for example, the mechanisms of regeneration of the cartilage act like healthy forces, while the waste of the same one would be the pathogen force. When considering to this illness like "irreversible", many doctors conform to with it prescribed anti-inflammatory and analgesic that, if they don't accompany of other measures, they don't have real therapeutic effect, but only palliative of the symptom of the pain. The rest that is usually recommended these patients, is a it arms of two edges, because although it impedes the waste of the cartilage, also difficult the activation of its regeneration and, to the long one, it finishes producing atrophy for disuse.

The exercise can also be stimulative of the regeneration, if it is moderate, or to contribute to the waste of the cartilage, if it is more intense of it than this it can support. Often, the exercise is painful and it cannot be carried out.

Other methods that act in more or smaller measure in favor of the regeneration of the fabrics of the apparatus locomotive are the **termoterapias and masoterapias** in their different forms, the injections of derivative glicosaminoglicanos..... and many of those "heterodox medicines" (acupuncture, reflexotherapy, homeopathy.....). However with too much frequency, these therapies produce a scarce stimulus with that that the goods, being almost always positive, they are often not very durable.

The Thermopercussion probably overcomes amply to all these techniques in what refers to the treatment of the rheumatic illnesses. For this statement we not only base ourselves on the excellent results of this study, in the goods, but also in the fact that the great majority of the patients had proven, before going to our center, different treatments of among it lauds mentioned with scarce or null results, and of there the great chronicity of people included in the study.

The therapy for Thermopercussion, through the stimulus unespecific of the continuous percussion and the heat for microwaves, would start the mechanisms of regeneration of the fabrics in a sufficiently intense way as to stop or even to revert the process of the illness. This would make it producing microlesions that, when being caused in way continuous, they would produce the same effect regenerator that a great traumatism, but, of course, without taking place that great lesion. It would be to put a chronic illness (in the one that there is so much little mobility of the pathogen forces as of the healthy ones) in sharp situation (where this forces have great activity), but exclusively in what refers to the regeneraters forces. There are theories that you/they try to explain the biochemical mechanisms of the therapy. It should be continued investigating in this line.

The effect in the **osteoporsis** explains to it in the following way. He/she leaves of an imbalance situation, in which the destructive **osteoclastos** of the bone has preponderance. The Thermopercussion by itself doesn't get balance the situation. However, when blocking the **osteoclastos** with ecalcitonina, the active Thermopercussion selectively the **osteoblastos**, with the rising formation of the bone. If later investigations confirm the results of these preliminary data, the repercussions of this therapy can be unimaginable.

They are also necessary new controlled studies on the other illnesses tried with this technique, including **artrosis** of another localizations and chronic arthritis. And how not, do have more than enough their applications in labor medicine, will we be able to reduce the time of low labor for sharp **lumbalgia**?

The Thermopercussion connects logically with the **masoterapias** (it is a special mechanical **masoterapia**) and with the termoterapias (when combining microwaves next to the percussion). It's also related with the homeopathy that seeks "the cure for him similar to innocuous dose." In this sense, it would be kind of a "physical homeopathy."

Probably, we are attending so much the birth of a new method that can revolutionize the rehabilitative therapy of the rheumatic illnesses, in the labor world as extralaboral.