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Technology of saturation or dilution of calcium in bone and cartilage tissues in osteoporosis

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Abstract

Technology of saturation or dilution of calcium in bone and cartilage tissues in osteoporosis, spondylosis and arthrosis developed by Germany company «VVL» [1,2] based on weak cyclic medicine [3-7] .
Currently, physical therapy cyclical device called «Calcium Adsorber» is registered in Ukraine. The objective of this technology is strengthening or weakening of the physiological action of parathyroid hormone and osteocalcin in the absorption, the saturation or dilution of calcium in the massive of solid impregnated with mineral salts fibrous intercellular substances and for star type cells.

The device consists of a pair of low-frequency acoustic resonance applicators for bones, with the frequency f = 418 Hz for the resonance of solid impregnated with mineral salts fibrous intercellular substances and for star type cells, and a second pair of high-frequency acoustic applicators with frequency f= 110 kHz kalogen fibers with solder their substance, which are impregnated with mineral salts and are composed of a plate consisting of layers of longitudinal and transverse fibers, and a frequency f= 160 kHz for the thin blood vessels Gavers' s channels, overlapping and plating applicator to the skin surface of j oint and spine range with the optimum voltage for the assimilation of calcium with frequency f = 418 Hz, voltage U = 0,06 - 0,09 V, current strength I = 50 mA. All applicators are working simultaneously.

Introduction

Technology of saturation or dilution of calcium in bone and cartilage tissues in osteoporosis, spondylosis and arthrosis developed by Germany company «VVL».

Currently, physical therapy cyclical device called «Calcium Adsorber» is registered in Ukraine. The objective of this technology is strengthening or weakening of the physiological action of parathyroid hormone and osteocalcin in the absorption, the saturation or dilution of calcium in the massive of solid impregnated with mineral salts fibrous intercellular substances and for star type cells.

Method

The device consists of a pair of low-frequency acoustic resonance applicators for bones, with the frequency f= 418 Hz for the resonance of solid impregnated with mineral salts fibrous intercellular substances and for star type cells, and a second pair of high-frequency acoustic
applicators with frequency f= 110 kHz kalogen fibers with solder their substance, which are impregnated with mineral salts and are composed of a plate consisting of layers of longitudinal and transverse fibers, and a frequency f= 160 kHz for the thin blood vessels Gavers's channels, overlapping and plating applicator to the skin surface of joint and spine range with the optimum voltage for the assimilation of calcium with frequency f = 418 Hz, voltage U = 0,06 ÷ 0,09 V, current strength I = 50 mA. All applicators are working simultaneously.
General view of the front of the physical therapy cyclical device the overall look with applicators and a schematic diagram located below.

Image1 Calcium adsorber. Front face without applicators with flash

Technical characteristics of the applicator

Name of applicator	Частоты, f
Bone resonant Low Frequency Acoustic applicator	418 Hz
Kalogen resonant First High Frequency Acoustic applicator	110 kHz
Capillaries resonant Second High Frequency Acoustic applicator	160 kHz
Electroplating	f = 418 Hz
	U = 0,06÷0,09 B
	I = 50 mA

Image 2 Calcium adsorber general view with applicators

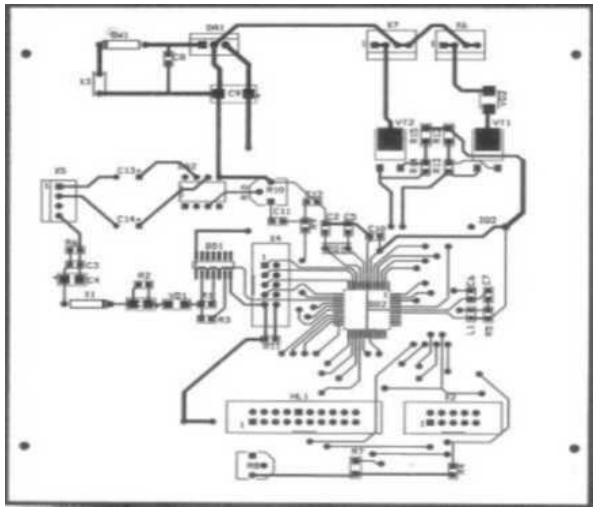

Image 3 Printed circuit board

Results

Method of saturation or dilution of calcium in bone and cartilage tissues was carried out on the following illnesses:

- Osteoporosis, Osteoarthritis of the knee joints,
- Osteoporosis, hip arthrosis,
- Osteoporosis, spine spondylarthrosis.

According to the first group of illnesses is 318 patients, according to the second illnesses is 232 patients, and the third - is 284 patients. The treatment was performed in an outpatient of traumatology department Odessa Regional Hospital for six months. All patients was tested in International Laboratory Synevo with bone condition analyses: parathyroid hormone, osteocalcin, calcium, phosphorus.

And has selected the patients with abnormal rates of osteocalcin, parathyroid hormone and bon calcium, phosphorus concentration.

The control tests done before the third and fifth procedure. Usually after the fifth procedure, abnormal dates parathyroid hormone and calcium of bone condition returns to normal. Necessary and sufficient technology requirement is taking the drug "Kaltsemin" and "Teraflex" by patients. Manipulation has continued for 45 minutes to 1.5 hours in prior of the drugs "Teraflex" and "Kaltsemina" for 3-4 hours before manipulation.

Researched the following groups of patients with osteoporosis:

- The low content of osteocalcin and high concentration of calcium in the bones. These patients was 52%, the parameters of the state of bone tissue returned to normal. Treatment of osteoporosis, arthrosis, spondylarthrosis was positive, the patients felt a significant improvement.
- The lower permissible content of osteocalcin and low content of calcium in the bones, these patients were 12% and 73% of cases, osteocalcin came back to normal, in 27% of cases, about as osteocalcin came back to normal, or 80% of the difference decreased, and calcium are also almost came back to normal, but the calcium content increased to 20% above normal, these patients almost always had a straight neck, hardly turned the body that could speak about a possible Bechterew's disease. Pain went away slightly.
- The high content of parathyroid hormone, low content of osteocalcin and low content of calcium in the bones, such patients was 7%, has always been an improvement in parameters of bone condition, the parameters have stabilized and were averaged over 5% of the difference, and obtained values that we could speak of timely treatment osteoporosis, arthrosis, spondylarthrosis and prevention of degenerative, degenerative processes. Patients

felt better, but all the pains is not completely gone.

- The high content of parathyroid hormone and high content of calcium in the bones. These patients was 4.5%.
- Bone condition analysis were improved, and in 82% of patients with parathyroid hormone came back to normal, 18% of patients with improvement occurred up to 50 % greater than the difference between the maximum limit and the current value of parathyroid hormone. Such patients require a more detailed medical investigation on hyperparathyroidism and a parathyroid tumors.
- • No treatment was applied. High parathyroid hormone and low calcium in the bones, indicating that hyperparathyroidism and possible malignant parathyroid tumors, such patients was 3, 1%.
- The remaining 21,4% patients were diagnosed with arthrosis mechanism of uric acid. Treatment was performed with the simultaneous introduction of allopurinol. In all cases, patients felt the outcome, but for these patients has not been saturated, and the equipment used in physical therapy purpose.

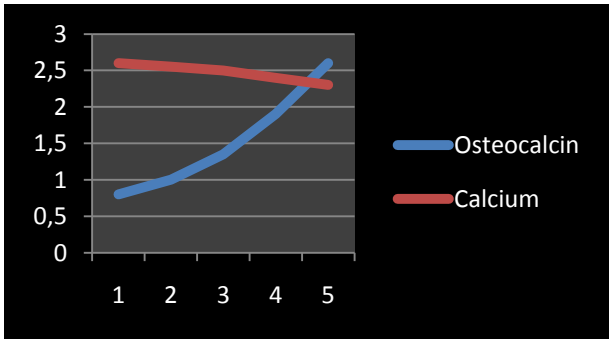

Image 4 The typical curve of the inverse relation between osteocalcin and calcium content

Graphics osteocalcin (blue) and calcium (red) for women with menopause.

Axis X - the quantity of manipulations (from 0 to 5). Axis Y - the content of osteocalcin (from 15 to 46 ng / ml) the content calcium (from 21 to 50 years - from 2.2 to 2.55 mmol / L) increase in osteocalcin to normal for each age group and gender.

In 93.4% of patients improved of calcium rate in bone tissue. At the same time he drops back to normal with a simultaneous.

Conclusions

Technology is the saturation or dilution of calcium in bone and cartilage can increase up to normal osteocalcin and lower content of calcium in the bones back to normal.

References

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[5] Ukrainian patent № 63310 "Method for the correction of pathological conditions impotence cyclic resonant vibrations", Vlastopulo Vladyslav.

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