

**ACUPUNCTURE INFLUENCE ON THE MINERAL METABOLISM IN
THE SYSTEM JAW-DENTAL IMPLANT BASED ON THE SERUM OF
BLOOD EXAMINATION DATA IN EXPERIMENT**

**Prof. I.O. Pohodenko-Chudakova MD, PhD, Dr. T.L. Shevela,
Belarusian Collaborating Centre of EACMFS,
Belarusian State Medical University, Minsk, Belarus**

Aim was to make comparative assessment of mineral metabolism indices change for experimental animals after dental implantation accompanied with classic acupuncture treatment combined with complex treatment; scientific bases for acupuncture application in order to activate osteosynthesis processes in the system «jaw-dental implant».

Objects and methods. Examination performed on 53 rabbits divided into 3 groups. Group I consisted of 21 animals. We make blood sampling for examining Ca^{2+} , acid phosphatase (AP) activity levels in the serum of blood, pH in oral fluid (group of standard). We extracted right central lower incisor and made dental implantation for 32 rabbits (groups II and III). Operation performed under intravenous anesthesia. Second group was a group of control underwent ordinary treatment. Animals of group III had 10 days acupuncture treatment postoperatively additionally. We examined Ca^{2+} , AP activity levels in the serum of blood, pH in the oral fluid for animal of groups II and III: before operation, 3, 7, 14, 21 and 30 days after operation. During the treatment we checked common and local clinical status. Ca^{2+} level was evaluated in the serum of blood with AVL device. AP level activity was determined in the serum of blood kinetically with PBS device. pH in the oral cavity was determined with litmus paper.

Results. Animals of group I had indices for Ca^{2+} , AP activity level, pH. We fixed the best results in group III. Ca^{2+} indices for the 3rd group had authentic difference with initial indices by 4 examination. Ca^{2+} indices were authentically different comparing III and II groups of the 4 examination. No authentic difference between III and standard groups. AP activity level became less by the 3rd

examination in group III. It was authentically better to the results of group II. This result was stable, no negative figures in the next examinations. pH indices became normal by 30 days in the group of control. The same results were achieved by 2nd examination for group III. One month later complications were fixed in the group of control – implants were rejected for 67% of animals and soft tissue near the implant became inflamed. Group III treated with acupuncture additionally had the same complications in 25% animals.

Conclusion. Acupuncture has positive influence to the organism homeostasis of experimental animals underwent dental implantations. Complex treatment combined with acupuncture has insignificant indices advantages. Acupuncture influence on the oral cavity homeostasis and human organism, osteointegration processes in the system jaw-dental implant should be studied further.