

Effects of hypokinesia on cyclic nucleotides and hormonal regulation of calcium metabolism in rats.

Abstract:

To study the dynamic of changes in the level of parathyroid hormone (PTH), calcitonin (CT), cyclic nucleotides (cAMP, cGMP) and calcium in the blood of rats, while in urine--phosphate, calcium and cyclic nucleotides. Laboratory based experiment. Laboratory in the Department of Biochemistry, Faculty of Medicine, University of Nairobi, Nairobi, Kenya and in the Department of Biochemistry, Kharkov State University, Ukrain Republic. Correlation between the changes in the parameters of study was shown. This supports the theory about the relationship between branches of hormonal systems (cyclic nucleotides-calcium), which perform the central role in the regulation of homeostasis. The results show that daily excretion of calcium and phosphate is age dependent in rats during the pathogenesis of hypokinesia: the values are higher in control groups. Changes in calcium in the blood and phosphaturia in the experimental animals of all ages were attributed to changes in the intensive re-absorption process within the bones during the readaptation period of hypokinesia. Old rats have a higher ability to adaptation than younger experimental counterparts during hypokinesia.