

We determined, that gastrin concentration in a blood plasma of rats of the control group was on the average $59,0 \pm 35,05$ pg/ml. In the blood plasma of experimental rats, to whom omeprazole was injected for a long time, the concentration of gastrin was increased and it was on the average $170,7 \pm 90,7$ pg/ml. Thus, hypergastrinemia is observed. The base of periodontium tissues is connective tissue, the fibrillar component of which is collagen. As known, broad-spectrum proteinases do not catabolise collagen fibers. The main proteinase of the collagen destruction is MMP-1 (metal-matrix proteinase, true collagenase). We determined, that under the conditions of long-term omeprazole administration gradual increase of MMP-1 activity during all experimental period is observed, with a maximum increase of it on the 21st day in 2,3 times ($p < 0,05$) compared with the control group of animals. On the 28th day of experiment the activity of collagenase reliable increases 1,07 times ($p < 0,05$) compared with the control. Free oxyproline is an indicator of collagenolysis, because hydroxylation takes place posttranslationally. Concentration of free oxyproline in soft periodontium tissues also gradually increases during all experimental period, that is settled down by the high activity of MMP-1. Maximum concentration of oxyproline is observed on the 28th experimental day in 1,9 times more, than in the control group of rats.

So, under the action of long-term omeprazole administration in the soft periodontium tissues pathological changes develop, such as: activation of MMP-1 and, consequently, increase catabolism of connective tissue fibrillar components.

INDIVIDUAL MINUTE DURATION DETERMINING IN UMSA STUDENTS FROM MOSLEMIC COUNTRIES

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Individual minute (IM) duration represents the criteria of biological rhythms endogenous organization as well as the organism functional state (Л.И.Губарева, Р.О.Будкевич, Е.В.Арапова, 2007). This index is a rather stable index in healthy people. IM characterizes time endogenous organization as well as the organism adaptation abilities. People with high abilities to adaptation have IM more than the minute of physical time and equal to 62,9-69,7 sec, while it is less than 1 min and equals to 47,0-46,2 sec in the people with low abilities to adaptation (Н.И.Моисеева, 1991, Л.И.Губарева, 2001). IM possesses circaseptal rhythm – its value is maximal on Tuesday and Wednesday and is minimal on Friday and Saturday. IM value helps also in testifying to the development of fatigue, dyschronosis, psycho-emotional tension. Taking into account IM value can be determined at the beginning and the end of the class, during the day, week, month, year.

IM estimation has been made by the method of Halberg (1969). The investigated person starts counting the seconds by the command of the investigating person silently (from 1 till 60). The numeral 60 must be pronounced loudly. Real time must be fixed with time-watch. It is better to count IM 2-3 times and then to estimate the average. One should take into account that the criterium of fatigue and lowered adaptative abilities in the adult is IM duration lowering more than to 20% of sex-age norm. If this lowering reaches 50% and more than it can be the human being over-fatigue and dysadaptation.

We examined 50 students of the 1-5 courses of medical department from Pakistan, Saudi Arabia, Syria, Iraq and Iran. The IM measurement was performed on Tuesday, Wednesday and Friday, at Physiology classes beginning and end.

IM level was maximal on Wednesday in people from all mentioned countries but mostly – from Iran. Minimal level was on Friday, the least values were for the inhabitants of Saudi Arabia, then for the Syrian. Maximal IM at the Physiology class start was detected for the Iranians and for the Pakistanians, the middle, practically equal level was observed for representatives from all mentioned countries. The least level of IM at the class end and thus the biggest level of fatigueability was for the students from Iraq and Saudi Arabia. Students from Syria, Pakistan and Iran were at practically equal level.

We propose to use this simple method of IM estimation for the students fatigue assessment. May be, it will help to increase their working activity. For example when reached the IM lowering more than 20% there can be break or the activity type change.