RESEARCH AND CRONOTYPE BIORHYTHMS CAPACITY OF STUDENTS

Abisheva Z.S., Dautova M.B., Asan G.K., Aikhozhaeva M.T., Iskakova U.B., Zhetpisbaeva G.D., Ismagulova T.M.

Asfendiyarov Kazakh National Medical University, Almaty, e-mail: valueology@kaznmu.kz

Regular, recurring changes in the nature and intensity of biological processes are called biological rhythms (biorhythms). As they are based on changes in metabolic processes under the influence of internal and external cyclical factors. It is believed that each person of the birth of their lives on biorhythms. Under the influence of unfavorable factors may occur between components biorhythmic systems. Moreover, some processes are in the same rhythm as well as to other phase-shifted. It is characterized by fatigue, decreased performance. In case of violation of human biorhythms are usually aggravated "available" in human disease. That is why so much attention is paid to the need for patient compliance date.

Introduction: In duration allocate 3 of biorhythm:The physical cycle – 23.69 days, the emotional cycle – 28.43 days, the intellectual cycle – 33.16 days.Chronotype person – stable individual periodization psychophysiological state. Isolated on chronotype "owl", "larks", "doves". It was believed that biorhythms directly proportional to chronotype, but proved that these two parameters are completely independent of each other and highly individual for each person. Knowledge of biorhythms and chronotype allow the student to make a rational schedule, as well as build business plans for the coming months.

The aim of the work: To determine chronotype and parameters of biological rhythms to select the sound mode of work, exercise and rest of students.

Materials and methods: To determine chronotype and biorhythms were 150 1st year students sheathe medicine, it was used Ostberg questionnaire consisting of 8 questions, other than that determined by the parameters of biorhythms, calculate the critical days and on the basis of the calculations was plotted individual biorhythms.

Results: Data on chronotype Ostberg questionnaire: "clean" owls – 9% "clean" Lark – 5%; "Clean" doves – 13%. Most people – mixed types – 73%. In the study of biological rhythms in different chronotype not set a definite pattern between workability, emotional and intellectual cycles. For each individual there chronotype biological rhythm (physical, emotional, intellectual).

Conclusion: The value of biorhythms is large enough in everyday life. Knowing the individual biorhythms depending on chronotype can build their plans for the month so that their implementation would have been the most productive. Biorhythms play a big role in the overall well-being and health. Keeping a certain mode that supports biorhythms, you can stay young longer.

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ANALGESIC NEPHROPATHY AS A LIMITING FACTOR WIDESPREAD USE OF THE NONSTEROIDAL ANTIINFLAMMATORY DRUGS

Ermolenko T.I., Karnaukh E.V.

Kharkiv national medical university, Kharkov, e-mail: ella69k@mail.ru

Currently a large group of nonsteroidal antiinflammatory drugs are widely represented by modern synthetic derivatives. More than 14 major pharmaceutical groups in chemical structure represented by a variety of active ingredients (International Nonproprietary Names, INN) and numerous shopping generics drugs. In modern medicine the main nonsteroidal analgesics-antipyretics are: acetylsalicylic acid (Aspirin), Acetaminophen (Paracetamol, Panadol, Kalpol, Efferalgan), Diclofenac sodium (Ortofen, Voltaren, Diklobene), Ibuprofen (Nurofen), Ketorolac (Ketanov), Indomethacin, Phenylbutazone, Piroxicam (Roksik), Lornoxicam (Ksefokam), Tenoxicam, Meloxicam (Movalis), Celecoxib (Celebrex), Nimesulide (Nimesil) and others. All of these drugs are very widely used as antiinflammatory, analgesic, antipyretic, antiplatelet agents for numerous indications in many areas of medicine (internal medicine, surgery, traumatology, sports medicine, neurology, gynecology, urology, oncology, ophthalmology, etc.). The most popular drugs in this pharmacological group, such as Diclofenac, even included in the list of vital and essential medicines. High popularity and an opportunity to buy on the open market in pharmacies without medical prescriptions provoked uncontrolled without a doctor self. As a result, the occurrence of recorded increasingly serious side effects, one of which is a kidney – analgesic nephropathy. Nephrotoxicity of these drugs due to their common mechanism of action, namely inhibition of the synthesis of vasodilating prostaglandins (PG E2) in renal tissue, which leads to vasoconstriction and deterioration of renal blood flow. Therefore, there are ischemic changes in the kidneys, reduced glomerular filtration. This causes a violation of water-electrolyte metabolism and changes in urine sediment (sodium and water retention, hyperkalemia, hematuria, proteinuria), increase in serum creatinine, appear edema, increased blood pressure. With prolonged

use (3–6 months) analgesic nephropathy may develop in the form of interstitial nephritis, nephrotic syndrome, renal papillary necrosis and renal failure due to the direct toxic damage of the differentiated epithelium distal renal tubules (necrobiotic changes with damage to the basement membrane). Also postrenal failure may be due to obstruction of the lumen by the intratubular deskvamation cells remains after papillary (tubular) necrosis of the kidneys. Nephrotoxicity is most pronounced in patients with heart failure, renal failure, hypertension, elderly patients, and when combined with nephrotoxic drugs – gold preparations, antibiotics (aminoglycosides, Afoteritsin B, tetracyclines) and combined multicomponents antiinflammatory drugs. The clinical nephrotoxicity monitoring is recommended in terms of creatinine in the blood in these cases necessarily.

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CHANGE OF N-TERMINAL PRO-BRAIN NATRIURETIC PEPTIDE IN PATIENTS UNDERWENT CORONARY ARTERY BYPASS GRAFTING

[1]Osipova O.A., [1]Nagibina A.I., [1]Suyazova S.B., [1]Shekhovtsova L.V., [2]Konstantinov S.L.

[1]Belgorod State National Research University, Belgorod, e-mail: osipova_75@inbox.ru;
[2]Belgorod Regional Clinical Hospital of St. Iosaph, Belgorod

Chronic heart failure is a widespread disease with a progressive course and poor prognosis. N-terminal pro-brain natriuretic peptide (NT-proBNP) are commonly used in the diagnosis of chronic heart failure (CHF).The release of NT-proBNP can occur even without an increase in diastolic pressure in the left ventricle (LV), during the brief episodes of myocardial ischemia. Revasculization for a myocardium can be one of the most effective methods of restoration of contractile abilities of a myocardium at the expense of influence on the basic pathogenetic mechanisms of CHF. Although there are few researches on the induction of ischemic myocardium release and prognostic role of NT-proBNP in patients undergoing myocardial revascularization, the results are very patchy and inconsistent.

Purpose. To determine the content of the NT-proBNP in patients underwent coronary artery bypass grafting (CABG), depending on the level of ejection fraction (EF) before surgery in the postoperative period.

Methods. 63 patients underwent CABG under on-pump without intraoperative myocardial damage were included for study. Patients were divided into two groups depending on the magnitude of left ventricular ejection fraction (LVEF): 33 patients with EF < 50 % on average (45,0 ± 7,3)% and 30 patients with EF > 50% on average (52,0 ± 5,5)%. NT-proBNP levels were determined within 12 days after surgery.

Results. Coronary artery bypass surgery resulted in improved hemodynamic indices of left ventricular myocardium, as evidenced by an increase in ejection fraction in both groups with EF < 50% and EF > 50% to 6,5% and 70%, respectively (p in both cases < 0,01). After coronary bypass surgery NT-proBNP levels were increased by 4,3 times in patients with EF < 50%, and in patients with EF > 50% – by 3,4 times (Table).

NT-proBNP level in patients after coronary artery bypass grafting, depending on left ventricular ejection fraction (M ± SD)

NT-proBNP	Controls n = 21	EF < 50 n = 33	EF > 50 n = 30	p		
	1	2	3	1–2	1–3	2–3
Before surgery, fmol/ml	5,1 ± 0,6	16,6 ± 9,5	10,9 ± 1,1	< 0,001	< 0,001	< 0,01
Postoperative, fmol/ml	5,1 ± 0,6	71,9 ± 33,0	37,4 ± 2,3	< 0,0001	< 0,001	< 0,001
p	> 0,05	< 0,0001	< 0,0001	–	–	–

Conclusions. The increase of NT-proBNP in patients after CABG on improved hemodynamics, increase in EF and absence of myocardial necrosis confirm the assumption that reversible ischemia can cause increased synthesis of NT-proBNP in the myocardium, the effect of which is aimed at the activation of myocardial healing process and is not associated with changes in hemodynamics.

References

1. Association of left ventricular diastolic dysfunction with elevated NT-pro-BNP in general intensive care unit patients with preserved ejection fraction: a complementary role of tissue Doppler imaging parameters and NT-pro-BNP levels for adverse